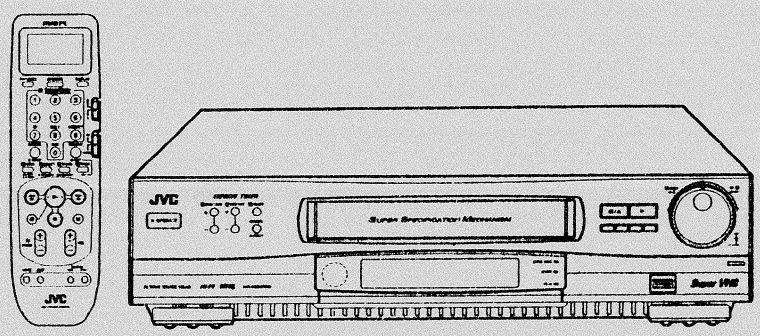
JVC

VIDEO CASSETTE RECORDER

HR-S5900EG/S6900EG



SHOWVIEW

premiere

Hi-Fi S-VHS 625

SPECIFICATIONS *(The specifications shown pertain specifically to the model HR-S5900EG)*

GENERAL

Power requirement		: AC 220 – 240 V~, 50/60 Hz
Power consumption		: 34 W
Temperature		
	Operating	: 5°C to 40°C
	Storage	: –20°C to 60°C
Dimensions (WxHxD)		: 435 x 109 x 387 mm
Weight		: 6.1 kg
Format		: S-VHS/VHS PAL standard
Maximum recording time	(SP)	: 240 min. with E-240 video cassette
	(LP)	: 480 min. with E-240 video cassette

VIDEO/AUDIO

Signal system	: PAL-type colour signal and CCIR monochrome signal, 625 lines/50 fields
Recording system	: Rotary two-head helical scan system with slant double-azimuth combination video heads
Signal-to-noise ratio	: 43 dB (Rohde & Schwarz noise meter)
Horizontal resolution	: 250 lines (VHS) 400 lines (S-VHS)
Frequency range	: 70 Hz to 10,000 Hz (Normal audio) 20 Hz to 20,000 Hz (Hi-Fi audio)
Input/Output	: 21-pin scart connector (IN/OUT x 1, IN/DECODER x 1) : RCA connectors (AUDIO IN x 1, AUDIO OUT x 1) : S connector (IN x 1, OUT x 1)

TUNER/TIMER

Channel coverage	: VHF 47 – 89/104 – 300/ 302 – 470 MHz UHF 470 – 862 MHz
Aerial output	: UHF channel 36 (Adjustable 32 – 40)
Memory backup time	: 60 min.

ACCESSORIES

Provided accessories	: Aerial cable, Infrared remote control unit, "R6" battery x 2, AC power cord Audio cable S-Video cable
Optional accessory	: VPT adapter VU-V142E

Specifications shown are for SP mode unless otherwise specified.
Design and specifications subject to change without notice.

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No. 82392
March 1994

Important Safety Precautions

Prior to shipment from the factory, JVC products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

● Precautions during Servicing

1. Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product. When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.

2. Parts identified by the ⚠ symbol and shaded (▒) parts are critical for safety.
   Replace only with specified part numbers.
   Note: Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.

3. Fuse replacement caution notice.
   Caution for continued protection against fire hazard.
   Replace only with same type and rated fuse(s) as specified.

4. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads

5. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers
   4) Insulation sheets for transistors
   5) Barrier

6. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

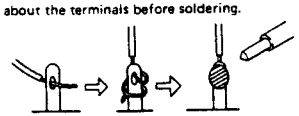


Fig. 1

7. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)

8. Check that replaced wires do not contact sharp edged or pointed parts.

9. When a power cord has been replaced, check that 10–15 kg of force in any direction will not loosen it.

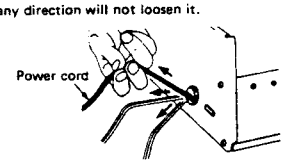


Fig. 2

10. Also check areas surrounding repaired locations.

11. Products using cathode ray tubes (CRTs)
    In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission. Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the specified parts. Under no circumstances attempt to modify these circuits. Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

12. Crimp type wire connector
    In such cases as when replacing the power transformer in sets where the connections between the power cord and power transformer primary lead wires are performed using crimp type connectors, if replacing the connectors is unavoidable, in order to prevent safety hazards, perform carefully and precisely according to the following steps.
    1) Connector part number : E03830-001
    2) Required tool : Connector crimping tool of the proper type which will not damage insulated parts.
    3) Replacement procedure
       (1) Remove the old connector by cutting the wires at a point close to the connector.
       Important : Do not reuse a connector (discard it).

Fig. 3

(2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

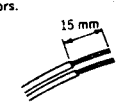


Fig. 4

(3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.

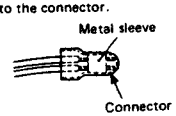


Fig. 5

(4) As shown in Fig. 6, use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

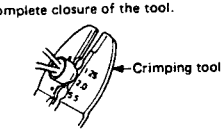


Fig. 6

(5) Check the four points noted in Fig. 7.

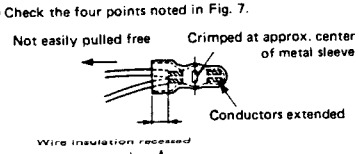

Not easily pulled free
Crimped at approx. center of metal sleeve
Conductors extended
Wire insulation recessed
more than 4 mm

Fig. 7

● Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions, Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

1. **Insulation resistance test**
   Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

2. **Dielectric strength test**
   Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

3. **Clearance distance**
   When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See table 1 below.

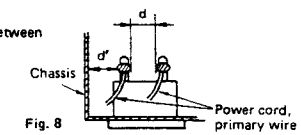


Fig. 8

4. **Leakage current test**
   Confirm specified or lower leakage current between earth ground/power cord plug prongs and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).
   Measuring Method: (Power ON)
   Insert load Z between earth ground/power cord plug prongs and externally exposed accessible parts.
   Use an AC voltmeter to measure across both terminals of load Z. See figure 9 and following table 2.

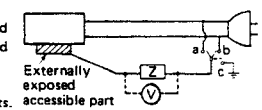


Fig. 9

5. **Grounding (Class I model only)**
   Confirm specified or lower grounding impedance between earth pin in AC inlet and externally exposed accessible parts (Video in, Video out, Audio in, Audio out or Fixing screw etc.).
   Measuring Method:
   Connect milli ohm meter between earth pin in AC inlet and exposed accessible parts. See figure 10 and grounding specifications.

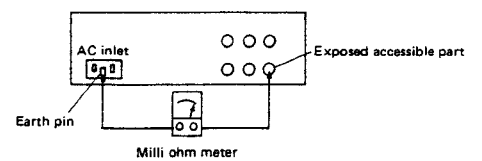


Fig. 10

Grounding Specifications

Region	Grounding Impedance (Z)
USA & Canada	Z ≦ 0.1 ohm
Europe & Australia	Z ≦ 0.5 ohm

AC Line Voltage	Region	Insulation Resistance (R)	Dielectric Strength	Clearance Distance (d), (d')
100 V	Japan	R ≧ 1 MΩ/500 V DC	AC 1 kV 1 minute	d, d' ≧ 3 mm
100 to 240 V			AC 1.5 kV 1 minute	d, d' ≧ 4 mm
110 to 130 V	USA & Canada	–	AC 1 kV 1 minute	d, d' ≧ 3.2 mm
110 to 130 V 200 to 240 V	Europe & Australia	R ≧ 10 MΩ /500 V DC	AC 3 kV 1 minute (Class II) AC 1.5 kV 1 minute (Class I)	d ≧ 4 mm d' ≧ 8 mm (Power cord) d' ≧ 6 mm (Primary wire)

Table 1 Specifications for each region

AC Line Voltage	Region	Load Z	Leakage Current (i)	a, b, c
100 V	Japan	1 kΩ	i ≦ 1 mA rms	Exposed accessible parts
110 to 130 V	USA & Canada	0.15 μF, 1.5 kΩ	i ≦ 0.5 mA rms	Exposed accessible parts
110 to 130 V 220 to 240 V	Europe & Australia	2 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Antenna earth terminals
		50 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Other terminals

Table 2 Leakage current specifications for each region

Note: These tables are unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

Safety Precautions

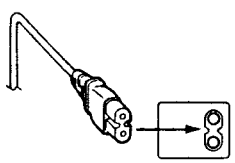
The rating plate and the safety caution are on the rear of the unit.

WARNING: DANGEROUS VOLTAGE INSIDE
WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

The OPERATE button does not completely shut off mains power from the unit, but switches operating current on and off.

This unit is produced to comply with Directives 76/889/EEC, 82/499/EEC, 87/308/EEC and Standard IEC Publ. 65.

CAUTION



- To avoid electric shock or damage to the unit, first firmly insert the small end of the AC power cord into the recorder until it is no longer wobbly, and then plug the larger end of the AC power cord into an AC outlet.
- When you are not using the recorder for a long period of time, it is recommended that you disconnect the power cord from the AC outlet.
- Dangerous voltage inside. Refer internal servicing to qualified service personnel. To prevent electric shock or fire hazard, remove the power cord from the AC outlet prior to connecting or disconnecting any signal lead or aerial.

WARNING

There are two different types of SECAM colour systems: SECAM-L, used in FRANCE (also called SECAM-West), and SECAM-B, used in Eastern European countries (also called SECAM-East).

1. This recorder can also receive SECAM-B colour television signals for recording and playback.
2. Recordings made of SECAM-B television signals produce monochrome pictures if played back on a video recorder of SECAM-L standard, or do not produce normal colour pictures if played back on a PAL video recorder with SECAM-B system incorporated (even if the TV set is SECAM-compatible).
3. SECAM-L prerecorded cassettes or recordings made with a SECAM-L video recorder produce monochrome pictures when played back with this recorder.
4. This recorder cannot be used for the SECAM-L standard. Use a SECAM-L recorder to record SECAM-L signals.

IMPORTANT:

- It may be unlawful to record or play back copyrighted material without the consent of the copyright owner.
- Please read the "Precautions" section of this instruction manual before installing or operating the recorder.

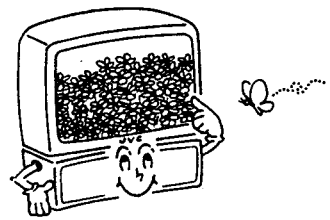
Video tapes recorded with this video recorder in the LP (Long Play) mode cannot be played back on a single-speed video recorder.

S-VHS 625 SHOWVIEW

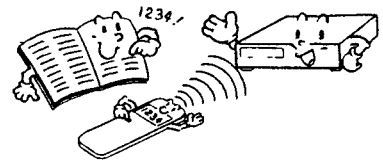
- Cassettes marked "S-VHS" and "VHS" can be used with this video cassette recorder. However, S-VHS recordings are possible only with cassettes marked "S-VHS".
- ShowView is a trademark applied for by Gemstar Development Corp. ShowView system is manufactured under licence from Gemstar Development Corporation.

Features

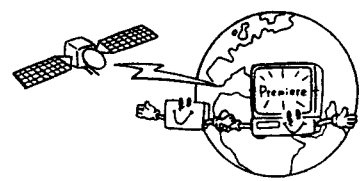
ENGLISH



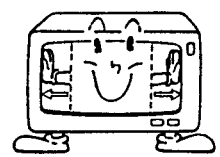
High Resolution with Super VHS
Super VHS (S-VHS) high-resolution picture is ideal for viewing on large-screen TVs, and remains beautiful even after editing.



ShowView LCD Remote Control
All the convenience of ShowView timer programming. Simply look through a TV listing, key-in the ShowView number of the TV show you want, and push a button to transfer it to the recorder!



Premiere Decoder Compatible
Can subscribe to Premiere and receive satellite broadcasts via a connected Premiere decoder.



Auto 16:9
Recording/playback of wide aspect ratio programmes with automatic detection. Puts you in touch with the latest in broadcast entertainment.

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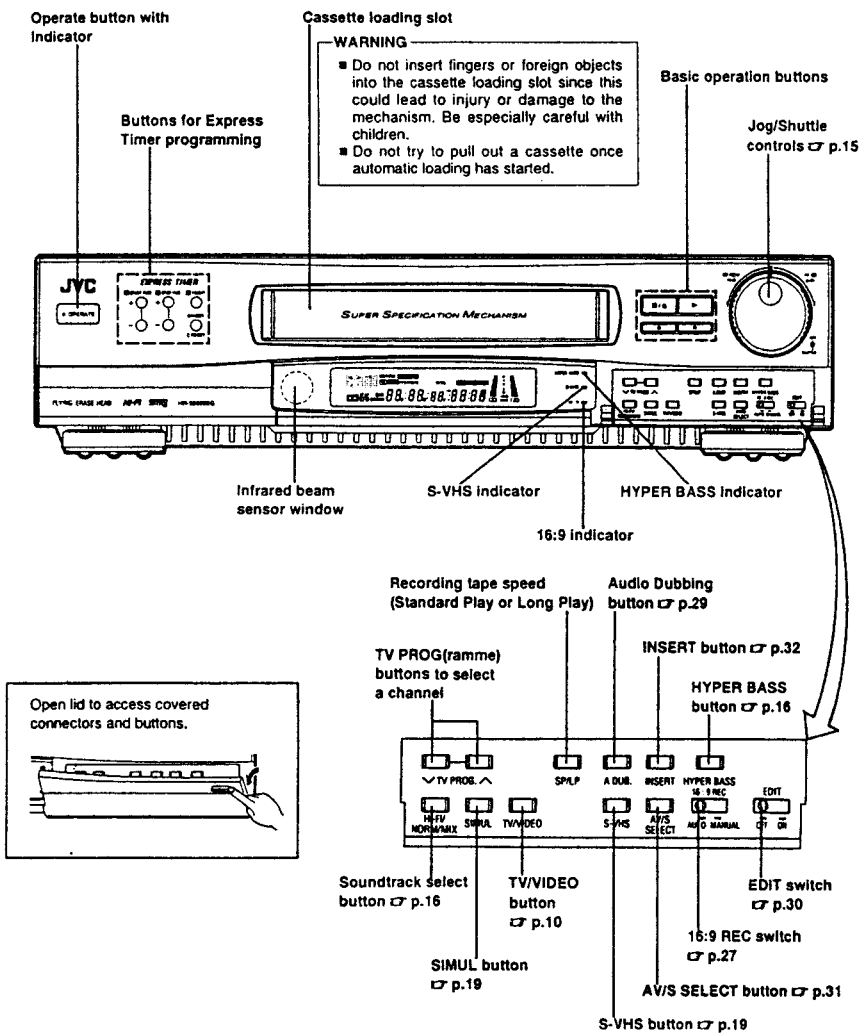
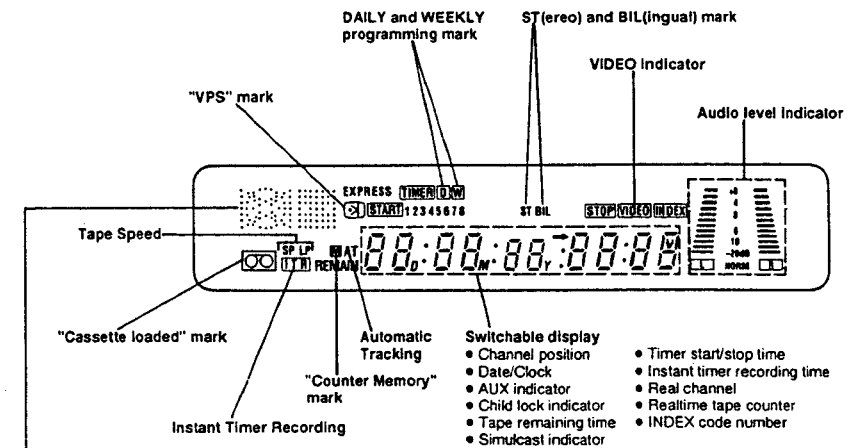
Controls And Indicators

Front Panel


Operate button with Indicator
Cassette loading slot
WARNING
■ Do not insert fingers or foreign objects into the cassette loading slot since this could lead to injury or damage to the mechanism. Be especially careful with children.
■ Do not try to pull out a cassette once automatic loading has started.
Basic operation buttons
Buttons for Express Timer programming
Jog/Shuttle controls ☞ p.15
Infrared beam sensor window
S-VHS indicator
HYPER BASS indicator
16:9 indicator
Recording tape speed (Standard Play or Long Play)
Audio Dubbing button ☞ p.29
INSERT button ☞ p.32
TV PROG(ramme) buttons to select a channel
HYPER BASS button ☞ p.16
Open lid to access covered connectors and buttons.
Soundtrack select button ☞ p.16
TV/VIDEO button ☞ p.10
SIMUL button ☞ p.19
EDIT switch ☞ p.30
16:9 REC switch ☞ p.27
AV/S SELECT button ☞ p.31
S-VHS button ☞ p.19

Display Panel

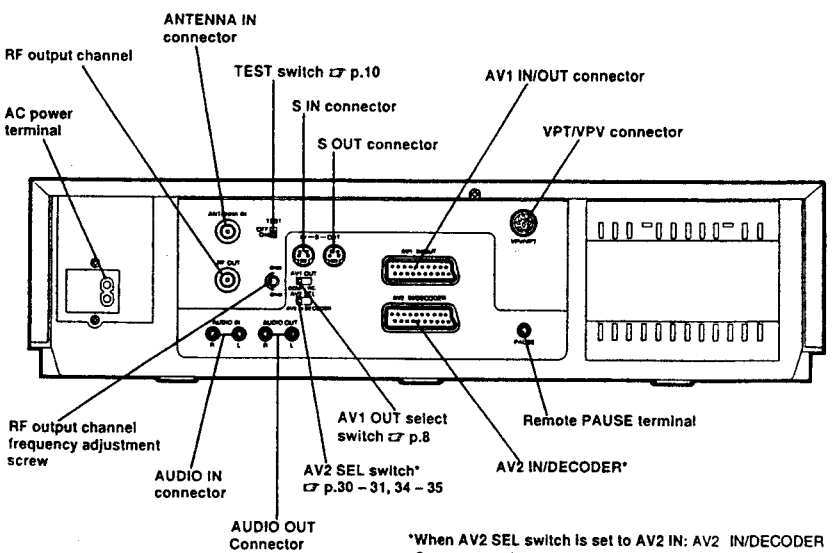


PLAY:	▷	REW VARIABLE SHUTTLE SEARCH:	◁ ◁◁	RECORD:	○	INSERT:	▷○
FF:	▷▷	REVERSE PLAY:	◁	RECORD PAUSE:	○ ‖	INSERT PAUSE:	▷○ ‖
REW:	◁◁	STILL: REVERSE SLOW:	◁ ‖	AUDIO DUBBING:	⊖	AUDIO DUBBING INSERT:	▷⊖
FF VARIABLE SHUTTLE SEARCH:	▷ ▷▷	STILL: FORWARD SLOW:	▷ ‖	AUDIO DUBBING PAUSE:	⊖ ‖	AUDIO DUBBING INSERT PAUSE:	▷⊖ ‖

ENGLISH

Controls And Indicators (cont'd)

Rear Panel

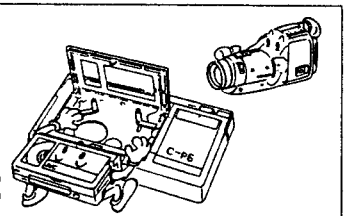


*When AV2 SEL switch is set to AV2 IN: AV2 IN/DECODER Connector works as auxiliary input connector.
When AV2 SEL switch is set to DECODER: AV2 IN/DECODER Connector works as input connector for Premiere decoder.

Usable Cassettes

Full-Size VHS
E-30 (SE-30**)
E-60 (SE-60**)
E-90
E-120
E-180 (SE-180**)
E-240

Compact VHS*
EC-30 (SE-C30**)
EC-45 (SE-C45**)

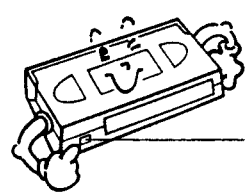


* Compact VHS camcorder recordings (PAL) can be played on this video recorder. Simply place the recorder cassette into a C-P6 Cassette Adapter and it can be used just like any full-sized VHS cassette.

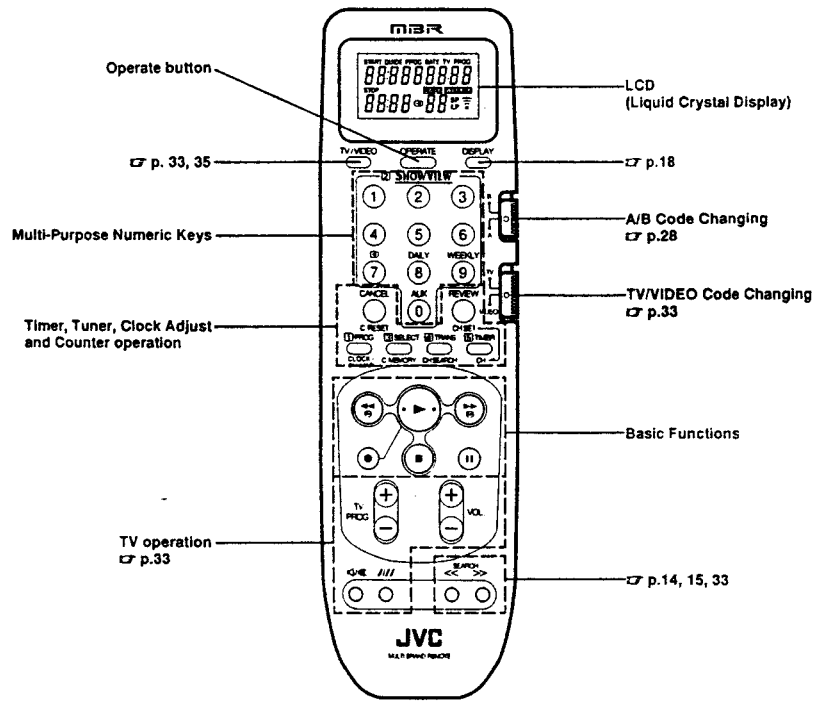
** This video recorder can record on regular VHS and Super VHS cassettes. While only VHS signals can be recorded on regular VHS cassettes, both VHS and Super VHS signals can be recorded and played back using Super VHS cassettes.

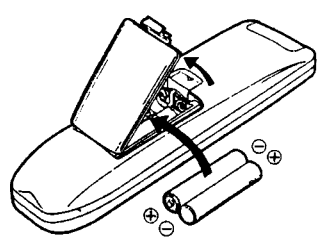
Accidental Erasure Prevention

To prevent accidental recording on a recorded cassette, remove its safety tab. To record on it later, cover the hole with adhesive tape.



Wireless Remote Control





Installing Batteries

1. Open the battery compartment cover.
2. Insert 2 "R6"-size batteries (provided) in the correct directions.
3. Replace the cover.

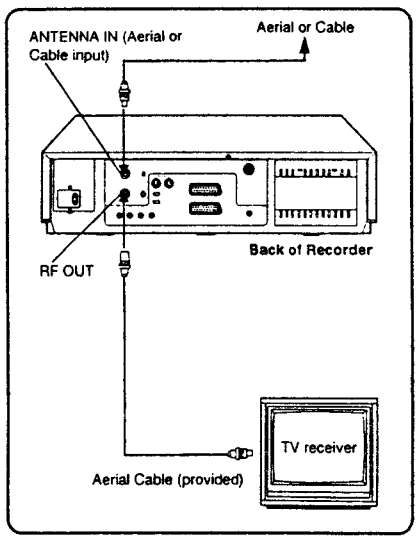
How To Use

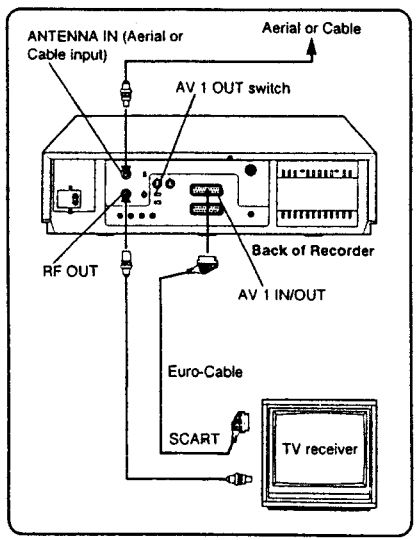
The remote control can operate most of your video recorder's functions, as well as basic functions of TV sets of JVC and other brands. ☞ p. 33.

- Point the remote control toward the sensor window.
- The maximum operating distance of the remote control is about 8 m.

Installation

It's essential that your video recorder be properly connected. Follow these steps carefully. THESE STEPS MUST BE COMPLETED BEFORE ANY VIDEO OPERATION CAN BE PERFORMED.





A RECORDER-TO-TV CONNECTION

RF CONNECTION

For TV sets without AV input terminals:

1. Connect the TV aerial cable to the recorder.
2. Connect the recorder to the TV's aerial terminal.

AV CONNECTION

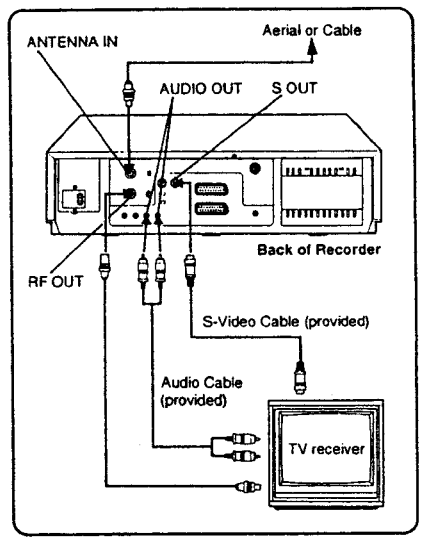
For TV sets with AV input terminals:

1. Connect the aerial, recorder and TV as per "RF CONNECTION".
2. Connect the recorder to the TV's AV-IN terminals.

AV1 OUTPUT SIGNAL SELECTION

The AV1 IN/OUT connector accepts only a composite signal (regular video signal), but can deliver either a composite video signal or a Y/C signal (a signal in which the luminance and chrominance signals are separated) according to the setting of the rear panel AV1 OUT switch.

- If your TV's SCART connector is compatible only with the regular video signal, set this switch to COMP.
- If your TV's SCART connector is compatible with the Y/C signal, set this switch to Y/C. You will better enjoy high-quality S-VHS pictures.
- If your TV's SCART connector is RGB-compatible, connect the KM-V7EG RGB Signal Converter (optional) between the AV1 IN/OUT connector and the TV's SCART connector, and set this switch to Y/C. The Y/C signal will be converted into an RGB signal for reproduction of high-quality S-VHS pictures.



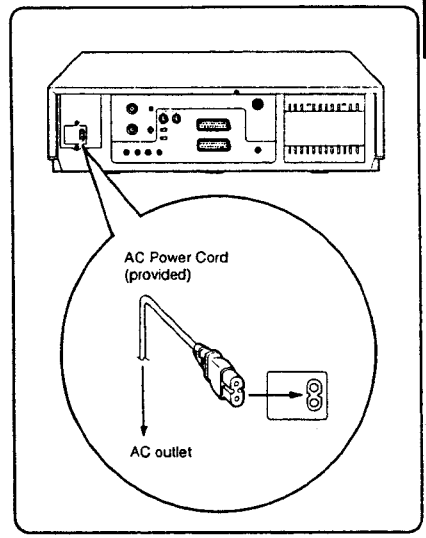
S-VIDEO CONNECTION

For TV sets with an S-VIDEO input terminal:

1. Connect the aerial, recorder and TV as per "RF CONNECTION".
2. Connect the recorder's S OUT terminal to the TV's S-VIDEO IN terminal.
3. Connect the recorder's AUDIO OUT terminals to the TV's AUDIO IN terminals.

NOTES:

- To make the most of Super VHS picture performance, we recommend you use the S-VIDEO connection.
- To operate the recorder with your TV using the S-VIDEO connection, set your TV to the VIDEO (or AV mode).
- If your television is not stereo-capable, use the recorder's AUDIO OUT connectors to connect to an audio amplifier for Hi-Fi stereo sound reproduction.

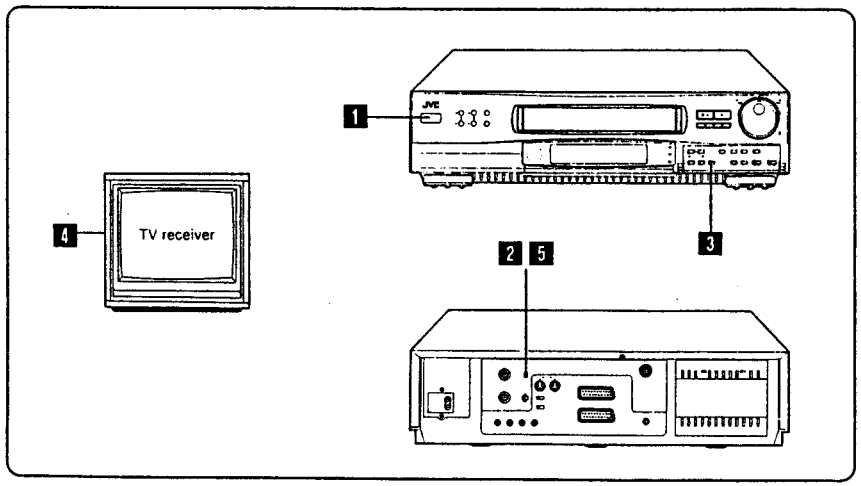


B CONNECT RECORDER TO AC OUTLET

1. First, firmly insert the small end of the AC power cord into the recorder, and then plug the larger end of the AC power cord into the AC outlet.

ENGLISH

Installation (cont'd)

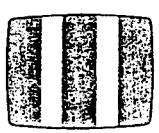


C TUNE THE TV TO YOUR VIDEO RECORDER

The video recorder sends picture and sound signals via the RF connecting cable to your TV on UHF channel 36.

TEST SIGNAL

1. Turn on the recorder.
2. Set the TEST switch to ON.
3. Press TV/VIDEO to engage the VIDEO mode.
4. Set your TV to the video channel. Tune the TV to bring the two vertical white bars on the screen most clearly. (UHF/CH 36)
   - Your TV should be set to the channel designated for use with a video recorder or to a spare channel if there is not a specified video channel on your TV.
5. Reset the TEST switch to OFF.



NOTES:

- If CH36 is occupied by a local station, adjust the RF output channel adjustment screw to use another channel between CH32 and CH40 instead.
- If some interference noise is continually seen on the screen, consult your JVC dealer.

IMPORTANT:

With RF Connection

- It is always necessary to set your TV's channel to UHF channel 36 (or adjusted channel) to operate the recorder with your TV.

With AV Connection

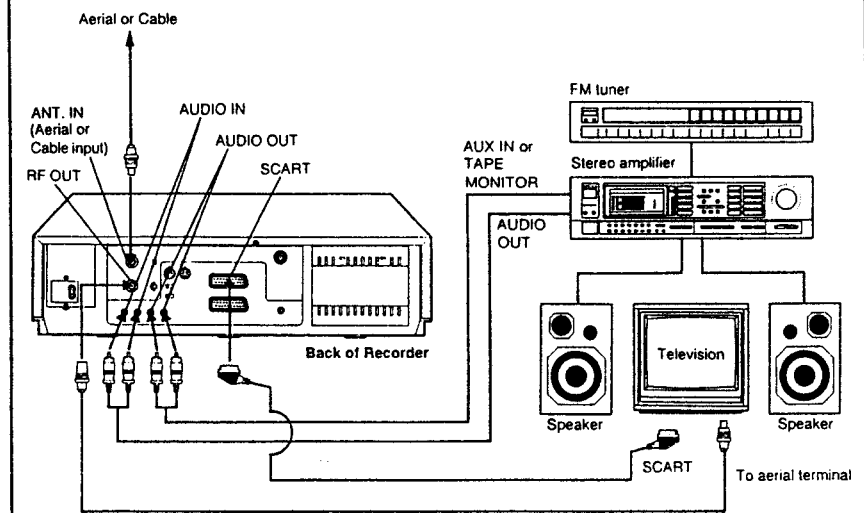
- Set your TV to the VIDEO (or AV), Y/C, or RGB mode according to the type of your TV's SCART connector.
- For switching the TV's mode, refer to the instruction manual of your television.
- The TV/VIDEO button switches the recorder's mode between TV and VIDEO. When the power is turned on, the recorder's TV mode is selected. To use the recorder's function, select the VIDEO mode.
- When the TV/VIDEO button is used to change the recorder's mode to VIDEO, the connected TV's mode also switches to VIDEO automatically.

With S-VIDEO Connection

- Set your TV to the VIDEO (or AV) mode. The S-VIDEO connection has priority over AV connection.

ENGLISH

CONNECTING TO HI-FI STEREO SYSTEM



If you have a Hi-Fi stereo system, you can connect your video recorder to it so that the sound can be heard through your Hi-Fi system. Please make these additional connections:

HI-FI AUDIO CONNECTION

1. Connect the AUDIO IN L and R connectors of the recorder to the recording output terminals of the amplifier.
2. Connect the AUDIO OUT L and R connectors of the recorder to the AUX IN or TAPE MONITOR terminals of the amplifier.

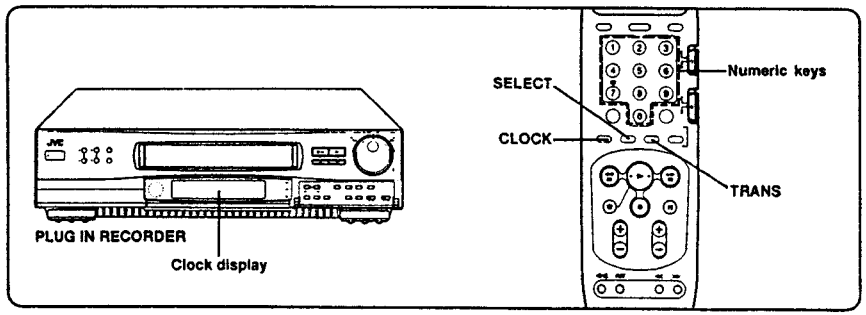
NOTES:

- Make sure L and R are correct when connecting the audio input and output connectors of the recorder to a stereo amplifier.
- If stereo or bilingual TV broadcasts are receivable in your area, this recorder can record them independently of the TV set and play them back through the connected audio system.
- When listening to sound from the connected stereo system, turn down the sound volume of the TV completely.

CAUTION:

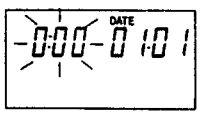
- This recorder has a dynamic range of more than 90 dB with regards to its hi-fi audio capability. It is recommended that you check the maximum level if you are going to listen to the hi-fi audio signals through a stereo amplifier. A sudden surge in speaker input may cause speaker damage.
- Some speakers and televisions are specially shielded to prevent television interference. If both are of the non-shielded type, do not place the speakers adjacent to the TV set, otherwise the video playback picture may be adversely affected.

Setting The Clock

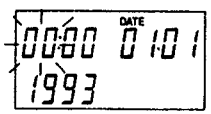


Since your video recorder bases all of its timer recording start and stop "decisions" on the time kept by its built-in clock, accurate setting of this clock is crucial for proper timer-recording results.

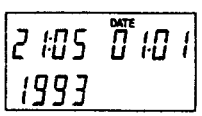
1. **Load batteries (☞ p.7).**



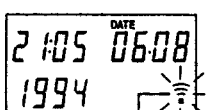
2. **Press CLOCK.**



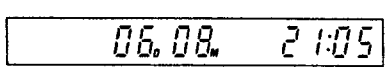
3. **Press the appropriate numeric keys to input the time.**
   - Example: For 21:05, press 2 1 0 5.



4. **Press the appropriate numeric keys to input the day, month and year.**
   - Example: For 6th August, 1994, press 0 6 0 8 1 9 9 4.



5. **Press TRANS with the remote control directed to the recorder's remote sensor window.**
   - The remote control's clock will start. At the same time, the set data will be transferred to the recorder.



TO MAKE CORRECTIONS

Press SELECT button so that the item you want to change blinks. Re-input that item. Continue to step 5.

AFTER A POWER CUT

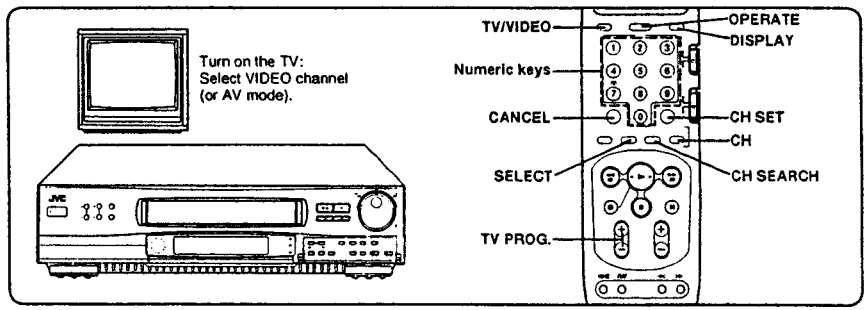
Since your video recorder has a 60-minute backup memory, it will not be affected by short power cuts. If mains power is unavailable for over 60 minutes, however, the recorder's display will reset to 0:00. In such a case, simply transfer the remote control's time to the recorder.

1. Press CLOCK three times.
2. Press TRANS with the remote control directed to the recorder's remote sensor window.

NOTES:

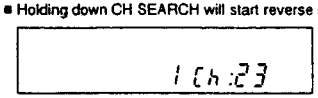
- If the day and month data is invalid (such as 31st April), the month digits are cleared automatically and the day digits will blink. Input again.
- If the year digits are automatically cleared in step 4, it is possible that you have input 29th February for a non-leap year. Input again.
- When the batteries are exhausted, the time display will change to "0:00" and start blinking. Replace all the batteries and set the clock again.

Setting The Tuner



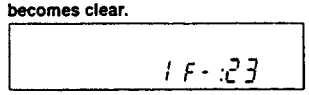
The procedure introduced here lets you assign receivable channels in your area to channel positions on your video recorder's tuner. Once stored, these can be accessed with the TV PROG. buttons.

1. **Press OPERATE to turn on the recorder.**
2. **Press TV/VIDEO to engage the VIDEO mode.**
3. **Press CH SET to engage the Channel Set mode.**
4. **Press CH SEARCH briefly to start automatic scanning for receivable channels.**
   - Automatic scanning stops when a station is detected, and the channel position will blink.
   - Holding down CH SEARCH will start reverse search.

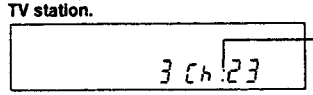


Ch = Regular CC = Cable

   - If you don't want to store the station detected, simply press CH SEARCH to continue automatic scanning.
5. **Press SELECT to fine-tune the channel, if necessary.**
   - When the picture is clear, proceed to step 8.
6. **Press TV PROG. +/– so that the picture becomes clear.**



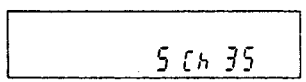
7. **Press SELECT.**
8. **Press numeric keys or TV PROG. to select the channel position where you wish to store that TV station.**



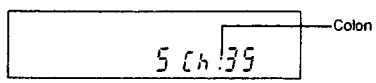
9. **Press CANCEL to store the station.**
   - The colon will disappear when the station is stored.
10. **Repeat steps 4 through 9 for other receivable channels.**
11. **Press DISPLAY to exit the Channel Set mode.**

TO DELETE STORED CHANNELS

1. Press TV PROG. to select the channel position you want to skip.
2. Press CH SET.



3. Press CANCEL.



   - The colon will appear when the station is deleted. Channel position 5 can no longer be chosen by TV PROG. buttons.
4. Press DISPLAY to exit the Channel Set mode.

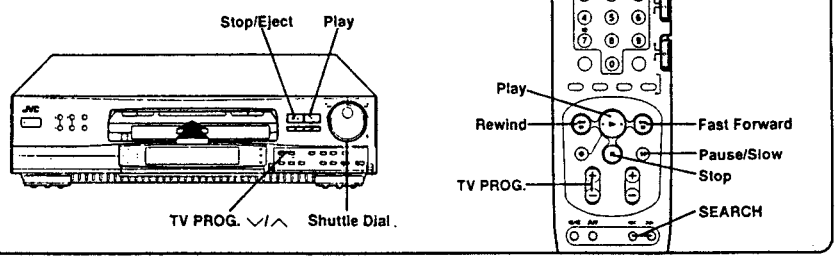
TO STORE NEW CHANNELS

1. Press CH SET.
2. Press CH.
   - Real channel starts blinking.
3. Press CH to change the band between Ch and CC, if necessary.
4. Press numeric keys to input the number of the real channel you want to store.
5. Press numeric keys to input the number of a vacant channel position.
6. Press CANCEL to store the channel.
7. Press DISPLAY to exit the Channel Set mode.

If using a Premiere decoder, ☞ p.34.

Playback

■ Turn on the TV: Select VIDEO channel (or AV mode).



Basic Operations

1. **Load a cassette.**
   - The recorder power will come on automatically.
   - The counter will re-set to "0:00:00" automatically.
   - If the safety tab on the cassette is removed, playback will start automatically.
2. **Press Play to start playback.**
3. **Press Stop to stop playback.**
   - To rewind the tape, press Rewind or turn the Shuttle to the left and release it.
   - To fast-forward the tape, press Fast Forward or turn the Shuttle to the right and release it.
   - To stop rewind or fast-forward, press Stop.
4. **Press Stop/Eject on the recorder to eject the tape.**

Variable Speed/High-speed Search, Still Playback/Frame Advance/Forward Slow Motion

During Playback or Still:
- Press either SEARCH button for variable-speed search.
- The more times the button is pressed, the faster the playback picture will move.
- To decrease speed, press the button for the opposite direction.

During Playback:
- Press Fast Forward for high-speed forward search, or Rewind for high-speed reverse search.
- For short searches, keep Fast Forward or Rewind pressed for more than 2 seconds. When released, normal playback will continue.
- Press Pause/Slow to view a still picture.
- Press again to advance the picture frame by frame.
- Press Pause/Slow for 2 seconds for slow motion.

Other Functions

Manual Tracking

Your video recorder is equipped with automatic tracking control. If there is picture distortion or "breaks" in the sound of Hi-Fi VHS tapes caused by mistracking, you can finely adjust tracking manually.

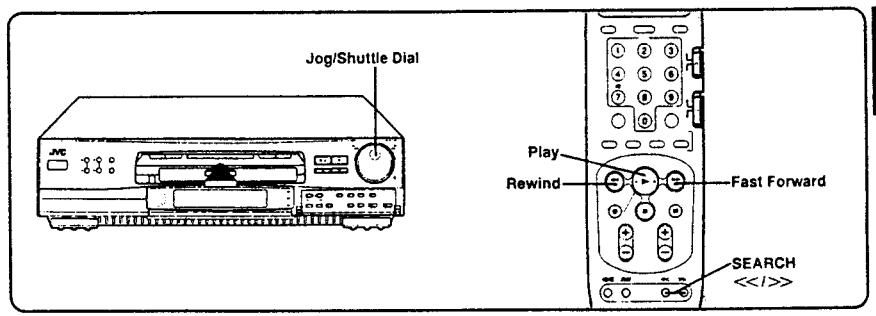
During Playback:
1. Press the recorder's TV PROG. ∨ and ∧ buttons simultaneously.
2. Press TV PROG. ∨ or ∧ to adjust tracking.
   - Press the recorder's TV PROG. ∨ and ∧ simultaneously to return to automatic tracking.

During Slow:
1. Simply press TV PROG. ∨ or ∧ to adjust tracking.

Repeat Playback

During Playback:
1. Press Play for more than 5 seconds, and release.
   - The Play indicator (▷) on the display panel will blink slowly.
   - The tape will be played all the way to the end, 20 times automatically, and then stop.
2. To stop the tape during Repeat Playback, press Stop.

NOTES:
- The recorder automatically stops when still continues for more than 5 minutes.
- If the still picture is unstable, use the TV PROG. buttons to correct the picture.
- During search playback, some noise bars will appear.
- There is no audio during search, slow, still, or frame-by-frame playback.
- When a new tape is inserted, the recorder enters the automatic tracking mode automatically.
- Tapes with monaural soundtracks (normal audio) are automatically played back in the NORM mode. When playing back tapes with Hi-Fi stereo soundtracks, ☞ p.16.
- When playing back LP recordings in the search, still, or frame by frame playback mode, the picture will be distorted, and there may be a loss of colour.

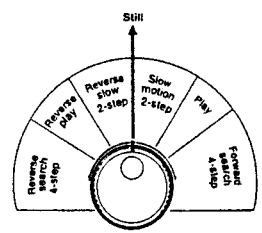


ENGLISH

Jog/Shuttle Control

You can view pictures in slow to fast motion, or frame-by-frame.

During Still or Playback:
1. Turn the outer ring (Shuttle) to the right for forward slow motion and search.
   - Release the Shuttle for a still picture, or...
   - For fast-forward with a visible picture, turn the Shuttle all the way to the right and release it within 1 second.
2. Turn the outer ring (Shuttle) to the left for reverse slow motion and search.
   - Release the Shuttle for a still picture, or...
   - For rewind with a visible picture, turn the Shuttle all the way to the left and release within 1 second.



During Still or Playback:
1. Rotate the inner dial (Jog) clockwise or counterclockwise for jog control. The tape moves frame-by-frame at the speed with which the dial is rotated, in the direction the dial is rotated.

To resume normal playback, press the Play button.

Open Search Function

Your video recorder lets you view the picture being rewound or fast-forwarded so you can easily check how far the tape has gone.

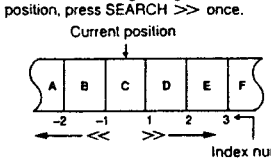
During Rewind:
1. Keep the remote's Rewind button pressed, or turn the Shuttle Dial fully to the left.
   - The rewinding tape's picture will be visible.
2. Release the Rewind button or Shuttle Dial to resume normal rewinding.

During Fast Forward:
1. Keep the remote's Fast Forward button pressed, or turn the Shuttle Dial fully to the right.
   - The fast forwarding tape's picture will be visible.
2. Release the Fast Forward button or Shuttle Dial to resume normal fast forwarding.

Index Search

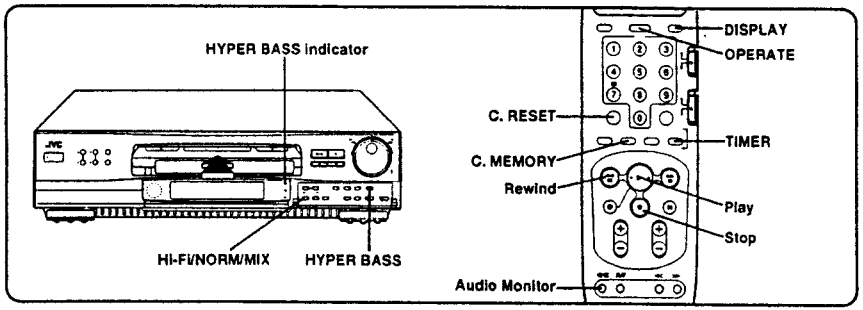
Your recorder automatically marks index codes at the beginning of each recording. This function gives you quick access to any one of 9 index codes in either direction.

During Stop:
1. Press SEARCH << or >>. "INDEX −1" or "INDEX 1" will be displayed on the display panel and search will begin in the corresponding direction.
2. If you wish to access index codes 2 through 9, press SEARCH repeatedly until the correct index number is displayed.
   Ex.: To locate the beginning of B from the current position, press SEARCH << twice.
   To locate the beginning of D from the current position, press SEARCH >> once.



- When the specified index code is found, playback will start automatically.

Playback (cont'd)



Other Functions (cont'd)

Counter Memory

During Playback:

1. Press DISPLAY until a counter reading appears on the display panel.
2. Press C.RESET at a point you wish to locate later.
   - The counter will read "0:00:00".
3. Press C.MEMORY.
   - The M indicator will light on the display panel.
4. When you wish to return to that point, press Stop and then Rewind.
   - The tape will rewind and stop at about "0:00:00" automatically.
5. To cancel the Counter Memory mode, press C.MEMORY again.

Next Function Memory

Your recorder can memorise what to do after rewind.

During Stop:

For automatic start of playback after the tape is rewound:

1. Press Rewind.
2. Press Play within 2 seconds.

For automatic power off after the tape is rewound:

1. Press Rewind.
2. Press OPERATE within 2 seconds.

For automatic timer standby after the tape is rewound:

1. Press Rewind.
2. Press TIMER within 2 seconds.

Soundtrack Selection

During Playback:

Your video recorder is capable of recording three soundtracks (HIFI L, HIFI R and NORM) simultaneously, and playing back the selected soundtrack.

- Pressing Audio Monitor on the remote control changes the track:

Track: (on display panel)	Use:
L + R	for Hi-Fi stereo tapes.
L	for main audio of bilingual tapes.
R	for sub audio of bilingual tapes.

- Pressing Hi-Fi/NORM/MIX on the recorder changes the mode:

Mode:	Track: (on display panel)	Use:
HIFI	L and/or R	for Hi-Fi stereo tapes
NORM	NORM	for audio-dubbed tapes.
MIX	NORM + L and/or R	for audio-dubbed tapes.

NOTE:

- Normally use the L + R position. Then Hi-Fi stereo tapes are played back in stereo, and tapes with normal audio only are played back automatically in the NORM mode.

Hyper Bass

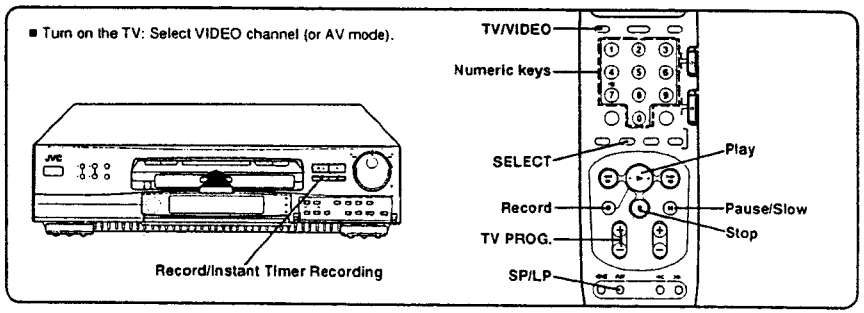
You can boost the bass sounds of music videos to make them sound more exciting.

During Playback :

1. Press HYPER BASS.
   - The HYPER BASS indicator will light, and bass sounds will be boosted.
2. Press HYPER BASS again to cancel the Hyper Bass mode.

Recording

- Turn on the TV: Select VIDEO channel (or AV mode).



ENGLISH

Basic Operations

1. **Load a cassette.**
   - The recorder power will come on automatically.
2. **Press TV/VIDEO to engage the VIDEO mode.**
3. **Press TV PROG. or the numeric keys to select the channel you wish to record.**
4. **Press SP/LP to select the tape speed.**
5. **Press Record and Play simultaneously.**
6. **Press Pause/Slow to pause recording.**
7. **Press Play to resume recording.**
8. **Press Stop to stop recording.**

To Watch Another Programme While Recording

During Record:

1. If your recorder is connected to the TV via AV connection, press TV/VIDEO.
   - The recorder's VIDEO indicator and the TV broadcast being recorded will disappear.
2. Use the channel controls on the TV to select the other channel you wish to view.
   - The programme selected with the TV channel controls will appear on the TV screen while the one selected with the video recorder's channel controls will be recorded on the tape.
   - If the Premiere decoder is connected to the recorder (☞ p.34), you can select the Premiere channel as well with the TV channel controls.

Instant Timer Recording (Off Timer)

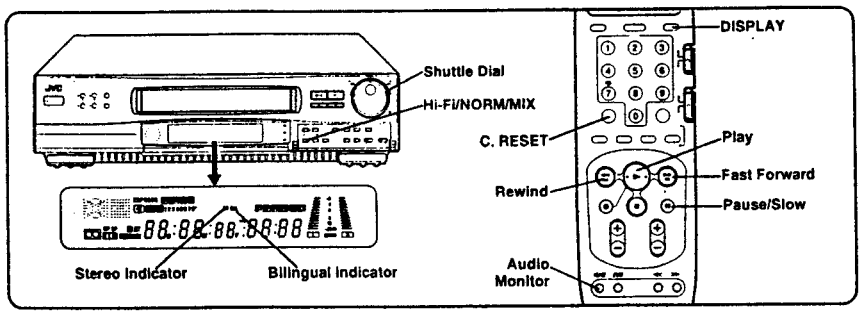
You can start a recording and then set the recorder to shut off automatically after a set duration.

During Record:

1. Press Record on the recorder. "ITR" and "0:30" indications appear, advising that power will switch off after 30 minutes.
2. Press Record again to delay the off-time by 30-minute increments (up to 4 hours).
   - For more precise setting, use the remote control's SELECT and TV PROG. buttons to set the exact time required (possible up to 8 hours and 59 minutes).

NOTES:

- To start recording with the recorder's Record button, press it once on its own.
- After pause, when recording is resumed, a few frames recorded before the pause may be overlapped by the new recording. This is meant to reduce picture distortion and is not a malfunction.
- The recorder automatically stops when record-pause continues for more than 5 minutes.
- If the Record button does not work, check to see if the cassette's safety tab has been removed.
- The channel cannot be changed while recording is in progress. To change the channel, engage the record-pause mode, then change the channel.
- The recorder automatically rewinds when the end of the tape is reached during recording.
- The recorder automatically places an index code on the tape every time recording begins. For information on the Index Search function, ☞ p. 15.



Other Functions

Elapsed Recording Time Indication

When you need to know the exact time of a recording.

1. Press DISPLAY until a counter reading appears on the display panel.
2. Press C.RESET before starting recording or playback.
   - The counter will be reset to "0:00:00" and show the exact elapsed time as the tape runs.

Display Button

When you wish to check the remaining tape time, clock time, date, or counter reading.

1. Press DISPLAY to display the remaining tape time.
2. Press DISPLAY again to display the current clock time.
3. Press DISPLAY again to display the current date.
4. Press DISPLAY again to display the counter reading.

Retake

You can cut out unwanted parts of a TV programme while you're recording it.

During Record:

1. Press Pause/Slow.
2. Turn the Shuttle dial or press Rewind (or Fast Forward) for search in the corresponding direction.
   - Release to return to Record-Pause mode.
3. Press Play when you wish to resume recording.

Stereo And Bilingual

Your recorder is equipped with a Sound-Multiplex decoder for reception of stereo and bilingual broadcasts.

- When a stereo programme is being received, the ST indicator lights on the display panel.
- When a bilingual programme is being received, the BIL indicator lights on the display panel.

To Record Stereo Programmes

Stereo programmes are automatically recorded in stereo on the Hi-Fi audio track (with the normal audio track recording mixed L and R channel sound). No special operation is required. Simply follow the basic recording procedure.

- To listen to the stereo soundtrack while recording, select "L+R" with Audio Monitor. ☞ p.16

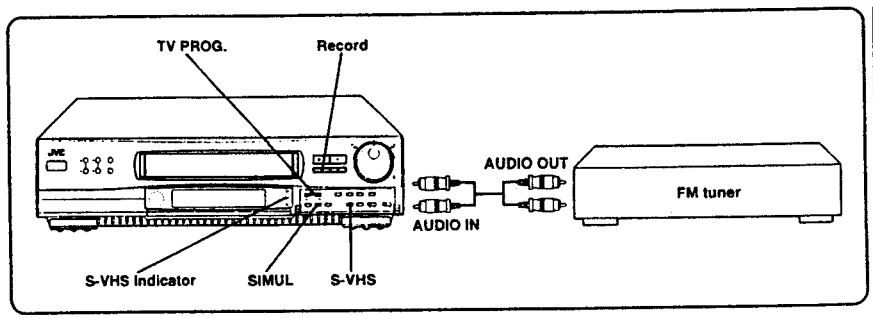
NOTE:

- If the quality of stereo sound being received is poor, the ST indicator will go off, and the broadcast will be received in monaural with better quality.

To Record Bilingual Programmes

Bilingual programmes are automatically recorded in bilingual on the Hi-Fi audio track. The main soundtrack will be recorded on the normal audio track.

- To listen to the Hi-Fi soundtrack during recording, select "L" for Main, and "R" for Sub.
- To listen to the normal soundtrack, select "NORM" with the Hi-Fi/NORM/MIX button on the recorder.



Simulcast Recording

Your recorder lets you record an audio programme while recording a TV programme. In the Simulcast mode, the TV soundtrack is recorded on the normal audio track and the external audio programme is recorded on the Hi-Fi audio track, so you can have two independent programmes. If FM simulcast TV programmes are available, record the TV programme and its FM-broadcast soundtrack simultaneously.

Preparation

- Connect the FM tuner to the rear panel AUDIO IN connectors.
- Set the FM tuner to the desired broadcast.

1. Press TV PROG. or the numeric key to select the TV programme you wish to record.
2. Select the Simulcast mode by pressing the SIMUL button.
   - "SC" will appear on the display panel.
3. Press the Record button to start recording.

NOTES:

- If you stop recording with the Pause/Slow button to avoid unwanted TV programme material, the audio programme is also cut.
- After finishing simulcast recording, be sure to press the SIMUL button to cancel the Simulcast mode, otherwise it is not possible to record on the Hi-Fi track from the built-in tuner.

S-VHS And VHS

Your video recorder can record in either S-VHS or VHS.

- To record in S-VHS, insert a cassette marked "S-VHS". The S-VHS indicator will light and the S-VHS recording mode is automatically selected.
- To record in VHS, insert a cassette marked "VHS". The VHS recording mode is automatically selected.
- You can also record in VHS on S-VHS cassettes. For this purpose, after inserting an S-VHS cassette, press the S-VHS button. The S-VHS indicator will go out.

Cassette	Type of recording	S-VHS Indicator
S-VHS	S-VHS	On
	VHS	Off
VHS	VHS	Off

Preparation For ShowView Timer Programming

What is ShowView?

For timer-recording to take place, information such as the channel, date, start time and stop time of the programme you wish to record, must be programmed into the recorder's timer memory. The ShowView system condenses all this information into a simple ShowView code number 4 to 9 digits long.

Since the ShowView number contains information on the channel number, if you live in an area that uses channel numbers that are different from those listed in your TV directory, these "differences" must be input into the remote control. This process is called "Channel Mapping" (CH MAP).

CHECK THE GUIDE PROG. NUMBERS

Preparation

- Make sure you have set the clock. (☞ p. 12)
- Make sure you have set the tuner. (☞ p. 13)
- Get a TV schedule listing (magazine, newspaper, etc.) which carries ShowView code numbers.

A Find out the channel position numbers your recorder tunes to when you use the TV PROG. –/+ buttons (the positions you stored on page 13) and write them into the list.

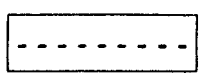
Example: 1, 2, 3, 4, 6, 8, 10, 12

B Look through the TV listing and find out the broadcast station name of each of the channels.

C Use the ShowView numbers to find out the GUIDE PROG. numbers for each of the stations.

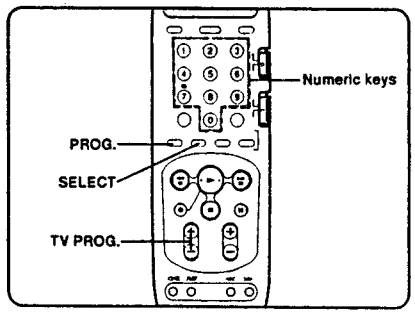
How to check:

1. **Press PROG.**

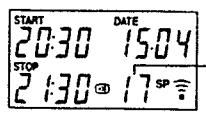


2. **Press the appropriate numeric keys to enter the ShowView number for a programme as it appears in your TV listing.**

- Make sure the ShowView number is for a programme which has not been broadcast yet.



3. **Press SELECT.**



- The number that appears as the channel number is the GUIDE PROG. number for that station. Write it into the list.

ATTENTION

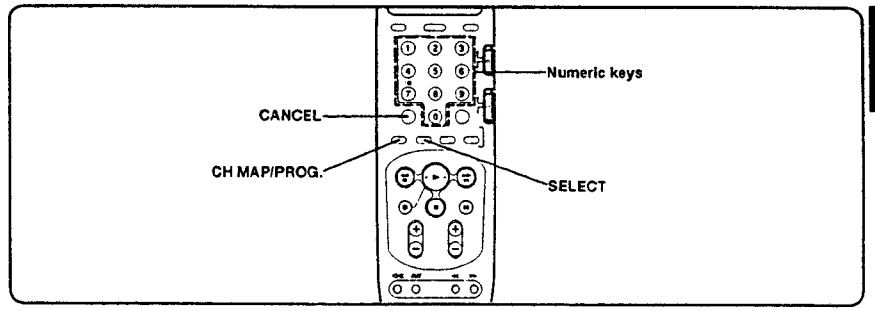
- When you press the SELECT button in step 3, "Err(or)" may appear on the LCD. This may mean that...
  - you entered a ShowView number for a programme which has already passed.
  - the GUIDE PROG. number for that station is a 3-digit number.
- For 3-digit GUIDE PROG. numbers, refer to your TV listing or consult your JVC dealer.

4. **Press PROG. and display the clock time.**

- Repeat steps 1– 4 and check the GUIDE PROG. number for each of the channels your recorder receives.

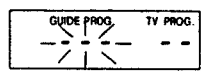
A Channel on your recorder (TV PROG. number)	B Station name	C GUIDE PROG. number
(ex.) 1	ARD	1
2	ZDF	2
3	WDR	17

D In cases where the channel number your recorder receives A and the GUIDE PROG. number C for that station do not match, it is necessary to make changes in the remote control's Channel Map. (continued on next page)



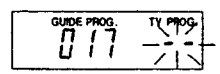
INPUT GUIDE PROG. NUMBERS INTO REMOTE

1. **Press CH MAP until the Channel Map display (below) appears in the remote control's LCD.**



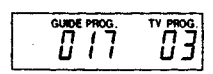
2. **Press the appropriate numeric keys to enter the GUIDE PROG. number (C column in your list).**

Ex.: For "1", press 0, 0, 1.
For "10", press 0, 1, 0.



3. **Press the appropriate numeric keys to enter the channel number your recorder receives that station on. (TV PROG. number, A column in your list.)**

Ex.: For "3", press 0, 3.



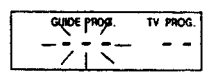
4. **Press SELECT.**

- To input other channels into the Channel Map, repeat steps 2 – 4 above.

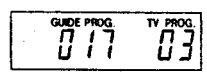
5. **Press CH MAP and display the clock time.**

TO CHECK/CANCEL GUIDE PROG. NUMBERS IN THE REMOTE

1. Press CH MAP until the Channel Map display (below) appears in the remote control's LCD.



2. Press SELECT until the GUIDE PROG. number you wish to check or cancel is displayed.

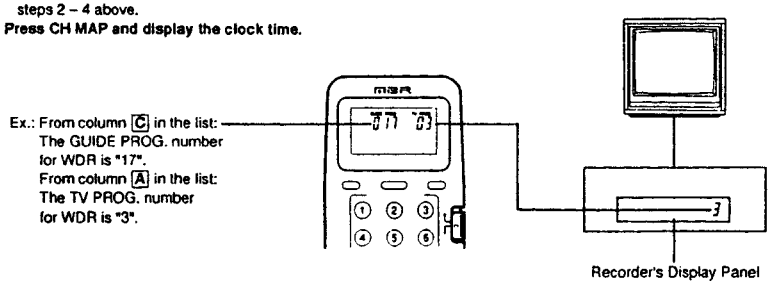


To Cancel:

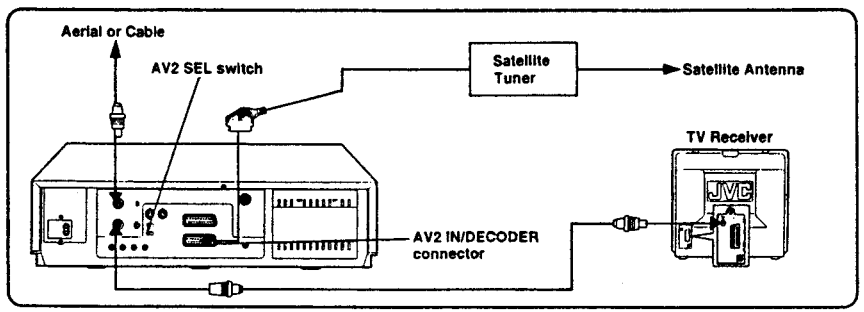
3. Press CANCEL.
4. Press CH MAP and display the clock time.

NOTES:

- When you move to another area, be sure to make changes in the Channel Map as necessary.
- When the remote control's batteries are replaced, the time or Guide Channel numbers you have set may be erased. If this happens, reset them again.


Ex.: From column C in the list:
The GUIDE PROG. number for WDR is "17".
From column A in the list:
The TV PROG. number for WDR is "3".
Recorder's Display Panel

Preparation For ShowView Timer Programming (cont'd)

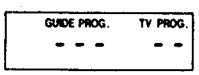


TO RECORD SATELLITE PROGRAMMES

Timer programming is also possible for programmes received via satellite tuner.

Preparation

1. **Connect the satellite tuner as illustrated to the AV2 IN/DECODER connector.**
   - Make sure the AV2 SEL switch is set to "AV2".
2. **Press CH MAP until the Channel Map display (below) appears in the remote control's LCD.**



3. **Press the appropriate numeric keys to enter the GUIDE PROG. and TV PROG. numbers as follows:**
   - For GUIDE PROG., enter the GUIDE PROG. numbers of the satellite stations that are receivable through your satellite tuner.
   - For TV PROG., always enter "00". When "00" is entered, "AU" will appear in the LCD.

4. **Press SELECT.**
   - To input other satellite stations into the Channel Map, repeat steps 3 – 4 above.
5. **Press CH MAP and display the clock time.**

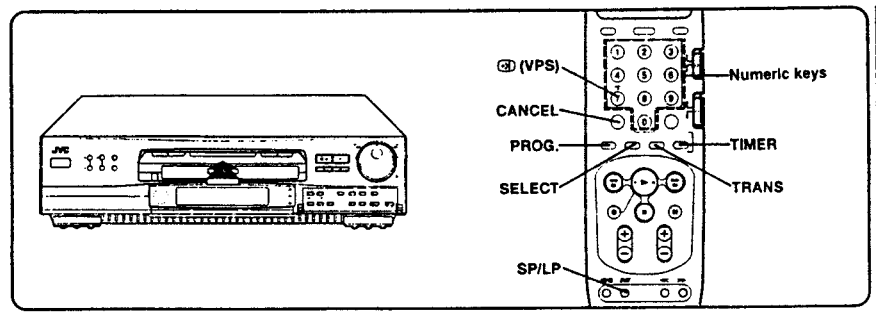
Operation

1. Turn on the satellite tuner and select the channel you wish to record.
2. Enter the ShowView number in the same way as shown in steps 1 – 7 of ShowView Timer Programming on p.23.

NOTE:

- After selecting the programme you wish to record from your satellite tuner, set the system's timer. If your satellite tuner does not have a timer, leave it switched on.

Timer-Recording — ShowView Timer Programming—

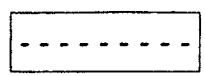


The built-in ShowView programming system greatly simplifies timer programming because you won't have to enter all the data that is usually necessary (such as date, start and stop time, and channel).

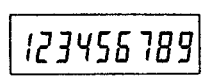
Preparation

Make sure you have set the GUIDE PROG. numbers (☞ p.20 or 22).
Insert a cassette with the safety tab in place.
- The recorder power will come on automatically.

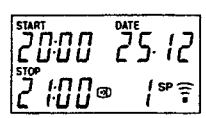
1. **Press PROG.**



2. **Press the appropriate numeric keys to enter the ShowView number for the TV programme you wish to record.**
   - For ShowView numbers, refer to your newspaper or TV directory.



3. **Press SELECT.**
   - The LCD will show the data for the ShowView number you just entered.
   - If the entered ShowView number is not proper, "Err" appears on the LCD. Check the ShowView number again and re-enter it.
   - Normally, you should leave " ⏲ " on so you can take advantage of VPS recording (☞ p.26). If you wish to cancel VPS, press ⏲ (the numeric key "7").



WEEKLY program: After step 3, press numeric key "9".
DAILY program: After step 3, press numeric key "8".

4. **Press SP/LP to select the tape speed.**
5. **Press TRANS with the remote control directed toward the recorder's Remote Sensor window.**
6. **Press PROG.**
   - The LCD returns to the clock display and the entered data will be automatically cleared.
   - If you need to set another program, repeat steps 1 – 6.
7. **Press TIMER.**
   - The recorder will enter the Timer mode and power will go off.

TO MAKE CORRECTIONS

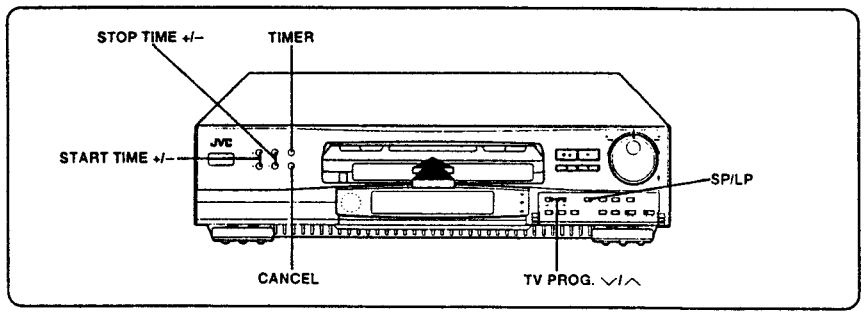
- In step 2, press CANCEL to backspace and re-enter the correct ShowView number.
- After checking the data in step 3, press PROG. twice and re-enter the correct ShowView number.
- After checking the data in step 3, if you want to delay the stop time, etc. press SELECT to make the item you want to change blink, and input new data.
- Pressing PROG. clears the programmed data.

To check, cancel and replace programs, ☞ p.25

To use the recorder after setting to the Timer mode, ☞ p.25

Timer-Recording (cont'd)

— Express Timer —



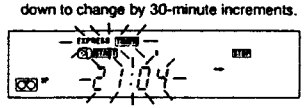
The "Express Timer" is the quick, "shortcut" method of directly programming your video recorder's timer for same-day or next-mornig recording. TV shows to be broadcast within 24 hours can be programmed for automatic recording simply by pressing three buttons (conveniently numbered) on your recorder's control panel.

TIMER PROGRAMMING IS NOT POSSIBLE UNLESS THE CLOCK HAS BEEN SET.

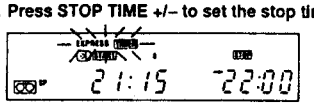
Preparation

Insert a cassette with the safety tab in place.
- The recorder power will come on automatically.
- The display panel will show the channel being received.
- To change the channel, press TV PROG.
- To change the tape speed, press SP/LP.

1. **Press START TIME +.**
   - The current time will appear on the display panel.
2. **Press START TIME +/– to set the start time.**
   - START TIME + (STOP TIME +) advances the time and START TIME – (STOP TIME –) reverses the time.
   - Press briefly to change by 1 minute. Hold the button down to change by 30-minute increments.



   - After the start time is set, the date (today or tomorrow) and channel will be displayed for 3 seconds.
3. **Press STOP TIME +.**
   - The start time will be transferred over to the stop time position.
4. **Press STOP TIME +/– to set the stop time.**



   - Normally, you should leave ⊡ on so you can take advantage of VPS recording. (☞ p.26) If you wish to cancel VPS, press ⊡ (the numeric key "7").
5. **Press TIMER.**
   - The recorder will enter the Timer mode and power will go off.

TO CANCEL THE PROGRAM

While timer programming, press CANCEL.
- Pressing CANCEL again disengages the Timer Program mode.

Or...

While in the Timer mode, first press TIMER to disengage the Timer mode, and press START TIME+. Then press CANCEL twice.

TO CHECK PROGRAMMED SETTINGS

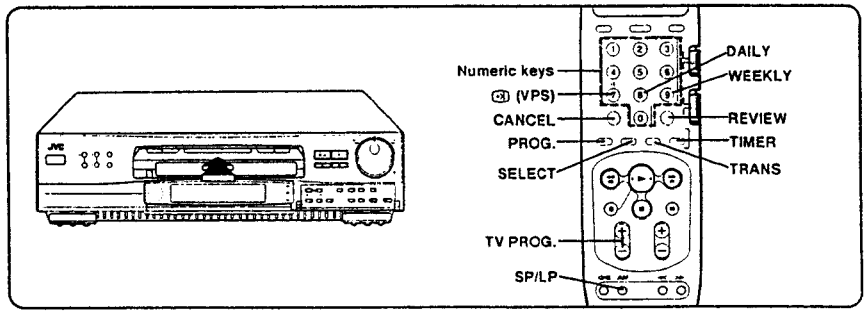
While in the Timer mode, press START TIME + to check the settings you have programmed. DO NOT press START TIME + while the Timer mode is cancelled because this will clear the programmed data for a new entry.

NOTE:
- If you are using a satellite tuner and wish to timer-record satellite programmes, before starting step 1, press TV PROG. until "AU 2" appears on the recorder's display panel.

ATTENTION:
- If you have programmed the timer's Program 8 (via the on-screen programming facility that is available when an optional VPT (teletext) adapter is connected (☞ p.39), using the Express Timer will clear that data from Program 8 and replace it with the Express Timer data.

To use the recorder after setting to the Timer mode, ☞ p.25

— LCD Timer Programming —



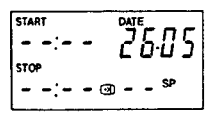
ENGLISH

The LCD timer programming lets you input all necessary settings manually. It's helpful if the ShowView number for the TV programme you want isn't readily available.

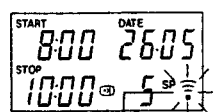
Preparation

Insert a cassette with the safety tab in place.
- The recorder power will come on automatically.

1. **Press PROG. twice.**
2. **Press numeric keys to input the date.**



   Ex.: For 26th May, press 2 6 0 5.
3. **Press numeric keys to input the start time, stop time and channel.**



   Ex.: For 8:00, press 0 8 0 0.

   Transfer-ready mark

   WEEKLY program: After you input the channel and the transfer-ready mark appears on the LCD, press numeric key "9".

   DAILY program: After you input the channel and the transfer-ready mark appears on the LCD, press numeric key "8".
   - Normally, you should leave ⊡ on so you can take advantage of VPS recording. (☞ p.26) If you wish to cancel VPS, press ⊡ (the numeric key "7").
4. **Press SP/LP to select the tape speed.**
5. **Press TRANS with the remote control directed to the recorder's Remote Sensor window.**
6. **Press TIMER.**
   - The recorder will enter the Timer mode and power will go off.

TO MAKE CORRECTIONS

- During steps 2 and 3, press CANCEL to backspace and input new data.
- After setting the channel in step 3, press SELECT to make the item you want to change blink, and input new data.
- Pressing PROG. clears the programmed data.

TO CHECK, CANCEL AND REPLACE PROGRAMS

To check preset programs:
1. Press REVIEW until the program settings are displayed on the display panel.
   - Program 1 is displayed with the number blinking.
2. Press SELECT to review the program contents in succession.
3. To check another program, press REVIEW again.

To cancel the program:
4. Press CANCEL.
   - You can press CANCEL at any stage while the program is open.

To replace a program:
5. Use the SELECT and TV PROG. buttons to input new data.

TO USE THE RECORDER AFTER SETTING TO THE TIMER MODE

For safety, your recorder disables all other functions while in the Timer mode.
- Press TIMER to disengage the Timer mode.
- To re-engage the Timer mode, press TIMER.

NOTE:
- If you are using a satellite tuner and wish to timer-record satellite programmes, make sure to input "0" for the channel number in step 3 to make "AU" appear.

Timer-Recording (cont'd)

Error Indications

The following error indications may appear on the recorder when you press the TIMER button to engage the Timer Standby mode. Here's why, and what you should do.

■ "TIMER" and "📼" on the display panel continue blinking.
WHY: There is no cassette in the recorder.
WHAT TO DO: Insert a cassette.

■ The cassette is automatically ejected. "TIMER" and "📼" continue blinking.
WHY: The inserted cassette has its safety tab removed.
WHAT TO DO: Insert a cassette with its safety tab intact. Or cover the safety tab hole of the cassette with adhesive tape and re-insert it. ☞ p.6.

■ "TIMER" blinks for 10 seconds and the Timer Standby mode is cancelled.
WHY: There are no preset programs in memory, or they have all been incorrectly preset.
WHAT TO DO: Check the programmed data and re-program it as necessary. Press TIMER again.

Other Indications

■ "TIMER" steady lit (with clock display).
WHY: The recorder is in the Timer Standby mode. This is the normal display you should see when you press the TIMER button.

■ "⏺" and "TIMER" steady lit.
WHY: Normal display while timer-recording is in progress.

■ The cassette was ejected, with power off and "TIMER" and "📼" are blinking.
WHY: This means that the end of the tape was reached while timer-recording was in progress. Therefore, the preset program may not be recorded in its entirety.

■ "0:00" blinking.
WHY: This means the clock must be set. It's displayed when time-keeping is terminated due to a power failure or because the recorder's power plug was pulled from the AC outlet.
WHAT TO DO: Set the clock. ☞ p.12.
■ If power was interrupted, it's also likely that all preset timer programming data has been erased. Please check and re-program as necessary.

■ "-- -- -- -- --" is displayed for about 5 seconds when the TRANS button is pressed.
WHY: Data was not successfully transferred. The program may have been incorrectly preset, or the recorder's clock has not been set, or all the recorder's timer programs (1 – 7) are preset.
WHAT TO DO: Check the LCD program, and re-program as necessary. Transfer the correct data. Or cancel unnecessary programs, and transfer again.

VPS Recording

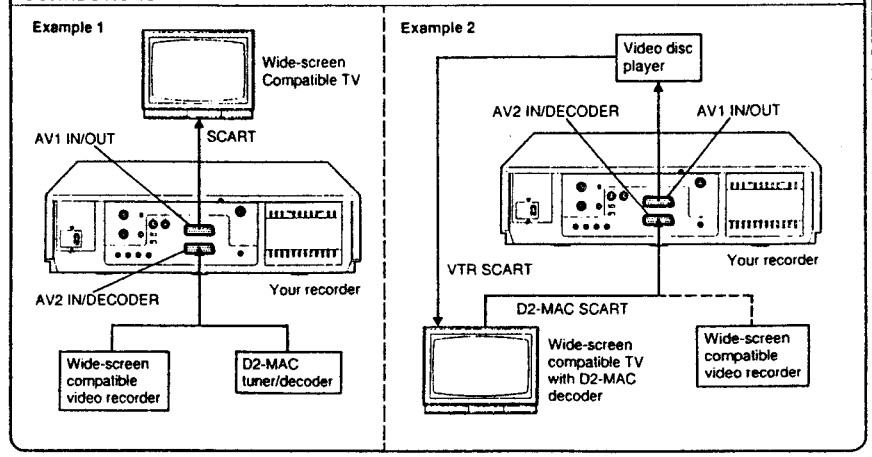
Available from some TV stations, VPS (Video Program System) is a service which assures accurate timer recording. Special code signals are transmitted so your recorder starts and stops recording when the preset TV programmes actually start and end — even if there is a schedule change.

TO USE VPS SERVICE

■ You do not have to cancel "VPS" even for non-VPS programmes, because those programmes will be recorded at the preset times.
■ If you wish to cancel "VPS", press the ⓥ button (the numeric key "7") on the remote control just before transferring the programmed data to the recorder. The ⓥ mark on the LCD will go out.

Information On Wide-Screen Viewing And Recording

CONNECTIONS



Wide-Screen Viewing And Recording

If your television is compatible with the 16:9 wide-screen format, please read this page to take full advantage of this recorder's Auto 16:9 function.

Set this switch to AUTO. Then your recorder will automatically record wide-screen programmes as "wide" and normal programmes as "normal".
Whichever position of this switch is selected, your recorder will automatically:

■ play back wide-screen programmes as "wide" and normal programmes as "normal".
■ control the television (if equipped with Auto Aspect Ratio Switching function) so that both types of programmes are displayed with the right proportions.

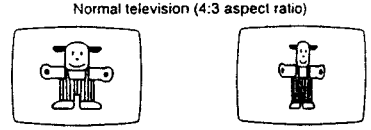
NOTES:

■ When using the Auto 16:9 function, press TV/VIDEO to make the VIDEO indicator disappear from the display panel.
■ When connecting a wide-screen compatible TV to the AV2 IN/DECODER connector, set the AV2 SEL switch on the rear of the recorder to "AV2 IN".
■ For the recorder to control the television, it must be connected to the TV via the AV1 IN/OUT connector.
■ For the recorder to record in the correct mode automatically, the signal must be applied to either the AV1 IN/OUT or AV2 IN/DECODER connector.
■ When recording wide-screen programmes via the S INPUT (S IN) or V INPUT connector, for example in tape-to-tape dubbing, set the 16:9 REC switch to MANUAL.
■ When playing back wide-screen programmes via the S OUT connector, switch the television to the 16:9 mode manually.

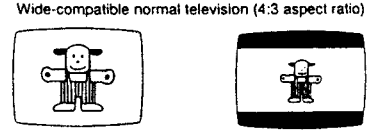
What You See On The Screen

Normal programmes **Wide-screen programmes**

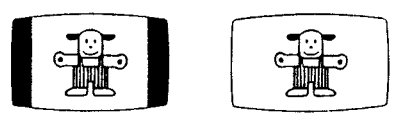
Normal television (4:3 aspect ratio)



Wide-compatible normal television (4:3 aspect ratio)



Wide-screen television (16:9 aspect ratio)



Other Functions

Remote A/B Code Switching

The remote control is capable of controlling two JVC video recorders independently; one set to respond to your remote control's A code control signals and another set to respond to B code control signals. The remote control is preset to send A code signals because your video recorder is initially set to respond to A code signals. You can easily modify your video recorder to respond to B code signals.

1. Unplug the recorder's power cord from the AC outlet.
2. Set the A/B switch to B.
3. Plug the power cord back into the AC outlet. Do not use other remote controls at this stage.
4. Turn the recorder power on using the remote control's OPERATE button. The recorder will now only respond to B code signals.

NOTE:
Some TV sets may malfunction in response to the B mode. If this happens switch back to the A mode.

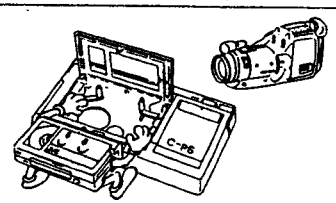
Child Lock Function

To avoid unwanted operation and prevent accidental recording...

1. Press the remote control's OPERATE button to turn the recorder's power off. Keep this button pressed for about 2 more seconds after the power LED indicator has gone off.
   - The Child Lock indicator (–) will appear on the display panel.
2. Child Lock is cancelled when you switch the recorder's power on with the remote's OPERATE button.
   - Pressing the TIMER button during timer-recording also cancels the Child Lock mode.

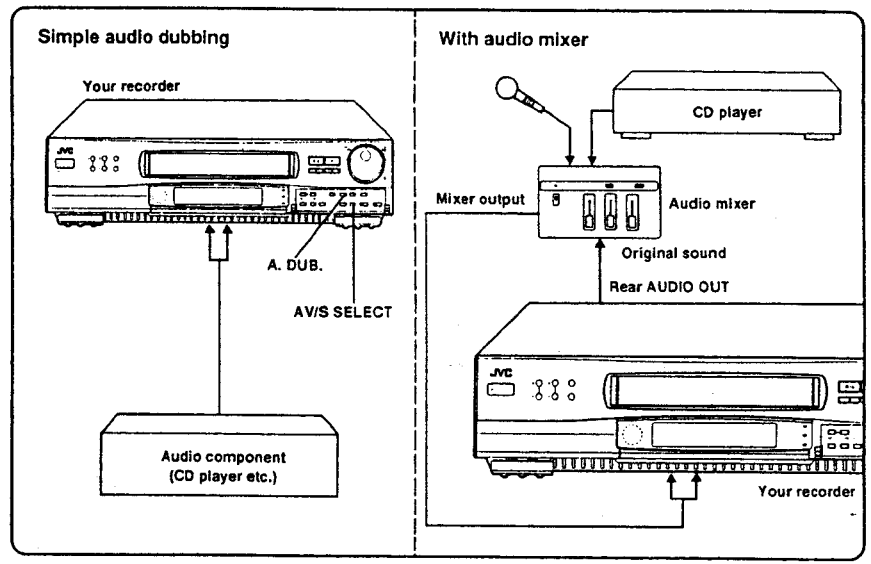
NOTES:
- While Child Lock is engaged, make sure you keep your remote control in a safe place inaccessible to children.
- Timer-recording is possible in the Child Lock mode. After timer-recording is done, Child Lock remains in effect.

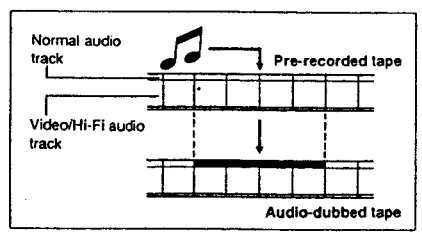
To Watch A Compact VHS Tape



Compact VHS camcorder recordings (PAL) can be played on your video recorder. Place the recorded cassette into a C-P6 Cassette Adapter and it can be used like any full-sized VHS cassette.

Audio Dubbing





Audio dubbing replaces the normal audio sound of a previously recorded tape with a new soundtrack.

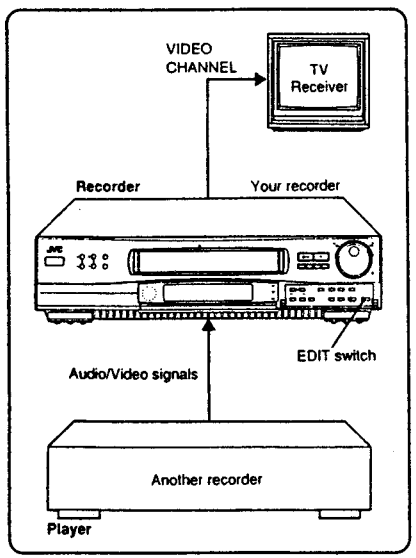
Preparation

Connect an audio component to the recorder's AUDIO IN L and R connectors. (For monaural equipment, use the L connector.)

1. Select the recorder's external input mode by pressing numeric key "0", and then press recorder's AV/S SELECT so that [S] appears on the display panel.
2. Start playback and engage the Still mode at the point from which you wish to start audio dubbing.
3. Press A. DUB.
4. Start playback of the audio source, and then press Play.
   - Audio dubbing will start.
5. Press Pause/Slow to stop audio dubbing temporarily.
6. Press Stop to stop audio dubbing.

NOTES:
- When monitoring the sound during Audio Dubbing, the normal soundtrack will be automatically selected. If you wish to hear the mixed sound (Hi-Fi + normal soundtracks), press the Hi-Fi/NORM/MIX button to select the MIX mode. ☞ p.16.
- Audio dubbing will stop automatically at the counter reading of "0:00:00", and the recorder will enter the Play mode. Check the counter before starting audio dubbing.
- Audio dubbing is also possible with input via the rear panel AV1 IN/OUT or AV2 IN. In these cases, select the appropriate input mode:
  - With AV1 IN/OUT, press numeric key "0" and then AV/S SELECT to select the AU 1 mode.
  - With AV2 IN, first set the AV2 SEL switch on the rear of the recorder to "AV2 IN", then press numeric key "0" followed by AV/S SELECT to select AU 2 mode.
- Audio dubbing is not possible with cassettes whose safety tab has been removed.

Editing

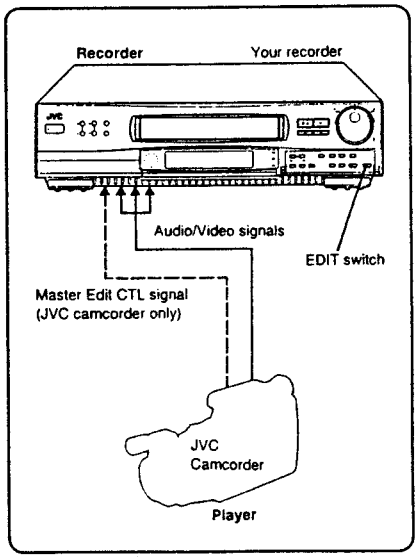


Editing From Another Recorder

Preparation

- Connect another video recorder to the rear panel 21-pin AV1 or AV2 socket, or S IN and AUDIO IN connectors.
- Engage the external input mode. (☞ p.31)
- Set the EDIT switch to ON.

1. Load the source tape in the player, and the recording tape in your recorder.
2. Select the recording speed (SP or LP).
3. Put your recorder in the Record-Pause mode.
4. Play back the source tape to search for scene to be edited.
5. Press the recorder's Play button where you want to start editing.
6. Press the recorder's Pause button to stop editing.
7. Repeat steps 4 through 6 to continue editing.



Editing From A JVC Camcorder

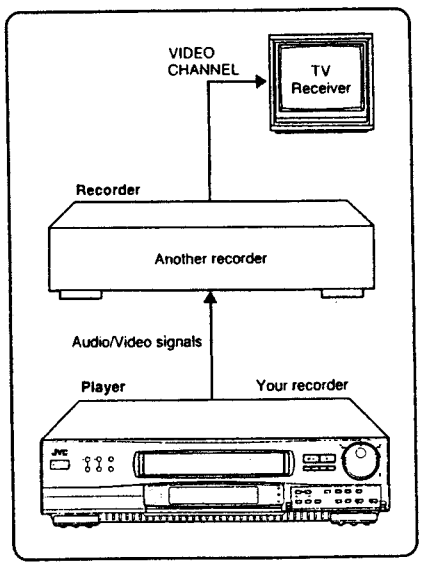
Preparation

- Connect the camcorder's AV OUT connector to the recorder's rear panel 21-pin AV1 or AV2 socket, or S IN and AUDIO IN connectors.
- Connect the AV output cable's mini-plug to the PAUSE terminal of the recorder.
- Engage the external input mode.(☞ p.31)
- Set the EDIT switch to ON.

1. Follow steps 1 through 7 of "Editing From Another Recorder" on the left.

NOTES:

- If the camcorder is equipped with the Master Edit Control system, you can control the recorder using the camcorder's controls. See the camcorder's instruction manual for operating procedures.
- With this connection, you can also use the camcorder as a video camera for direct recording onto the recorder's tape. Put the recorder in Record-Pause and use the camcorder's start/stop trigger to start and pause recording. (For direct recording with a separate video camera, a camera adapter is necessary.)



Editing To Another Recorder

Preparation

- Connect your recorder's AV1 IN/OUT or S OUT/AUDIO OUT to the audio and video input connectors of the recording deck.
- Set EDIT switch to ON.
- Engage the recorder's AUX mode.

1. Put the recorder in the Record-Pause mode.
2. Play back the source tape to search for a scene to be edited.
3. Press both the player's and recorder's Play buttons simultaneously.
4. Press the recorder's Pause button to stop editing.
5. Repeat steps 2 through 4 to continue editing.

Advantages Of S-VHS Video Recorders

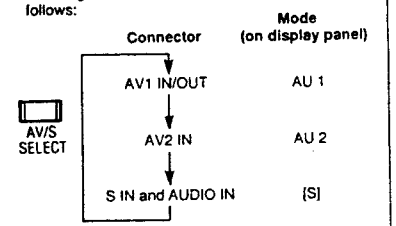
You can edit from VHS to S-VHS, S-VHS to VHS, or, needless to say, from S-VHS to S-VHS.

- From VHS to S-VHS: Record VHS playback signals in the S-VHS mode. Although the picture quality is inherently limited by that of the original, the edited tape has better picture quality than those made by VHS-to-VHS editing.
- From S-VHS to VHS: Because the picture quality of the source material is very high, the edited tape has better picture quality than those made by VHS-to-VHS editing.
- From S-VHS to S-VHS: All signals will be transferred without degradation.

How To Select The External Input Mode

To record external audio and video signals;

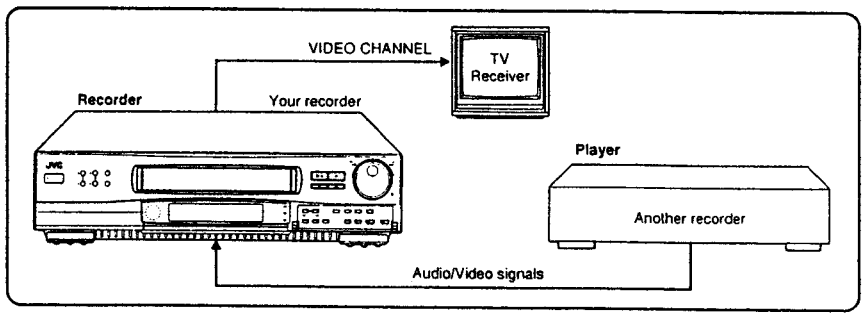
1. Press the remote control's numeric key "0".
2. Press the AV/S SELECT on the front of the recorder to select the appropriate external input mode.
   - Pressing AV/S SELECT rotates the input mode as follows:



NOTE:

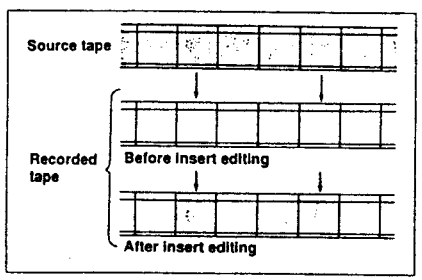
- To record input signals from the AV2 IN/DECODER connector, set the AV2 SEL switch on the rear of the recorder to AV2 IN.

Editing (cont'd)



Insert Editing

Insert editing replaces part of the recorded scene with new material. Both the picture and Hi-Fi audio soundtrack are replaced with new ones, while the normal audio soundtrack remains unchanged. If you wish to change the normal audio track as well, use the audio dubbing function simultaneously.



Preparation

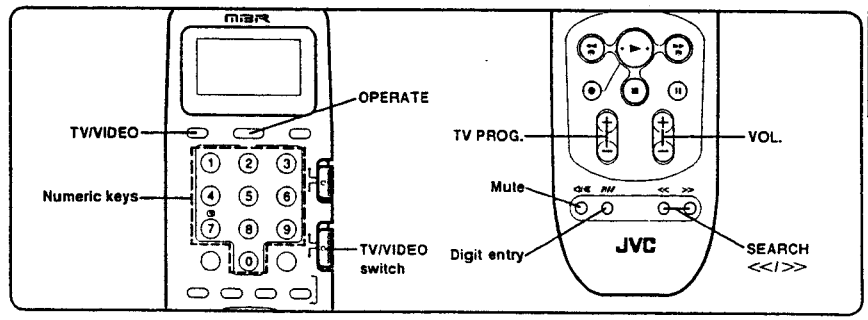
- Connect another video recorder to the rear panel 21-pin AV1 or AV2 socket, or S IN and AUDIO IN connectors.
- Engage the external input mode:
  - If the player is connected to the S IN and AUDIO IN connectors, press numeric key "0" and the AV/S SELECT until [S] appears on the display panel.
  - If connected to the AV1 IN/OUT connector, press numeric key "0" and the AV/S SELECT until "AU 1" appears on the display panel.
  - If connected to the AV2 IN connector, make sure the AV2 SEL switch is set to "AV2 IN", and press numeric key "0" and the AV/S SELECT until "AU 2" appears.

1. Load the source tape in the player, and the recording tape in your recorder.
2. Play back the recording tape and determine the edit-out point (the end of the segment to be replaced) using the Jog/Shuttle controls.
   - Releasing the Jog/Shuttle controls engages the Still mode.
3. Press C. RESET. (0:00:00)
4. Determine the edit-in point (the beginning of the segment to be replaced) using the Jog/Shuttle controls.
5. Press INSERT. (Insert-Pause mode)
   - For simultaneous replacement of the normal audio soundtrack, press A. DUB as well.
   - The TV screen changes from the still picture to the input signal you are going to record.
6. Play back the segment of the source tape to be inserted.
7. Press Play.
   - Insert editing will start. At counter 0:00:00, insert editing will stop automatically while the tape continues running in the Play mode.
   - If you wish to stop insert editing before the specified edit-out point, press C. RESET.

NOTE:

- Suitable leads can be obtained from your dealer.
- Insert editing is not possible with cassettes whose safety tab has been removed.
- Insert editing cannot be started from a non-recorded segment.
- In insert editing, the recording speed (SP/LP) is determined by the previous recording to be replaced. If the previous recording's speed changes within a single edit, the inserted picture will be distorted at the switching point.

Using The Remote Control For TV Operation



TV Code Setting

Your remote control can operate the basic functions of your TV set. In addition to JVC televisions, other manufacturers' televisions listed on the right can also be controlled by setting the remote control to "TV". If your television is a JVC (Code 1), you don't have to set the TV code in step 2.

1. Set the TV/VIDEO switch to "TV".
2. While holding down the OPERATE button, press the numeric keys corresponding to the code number for your TV's brand.
   - Press OPERATE to turn the TV power on.
   - Press TV/VIDEO to switch the TV between TV and VIDEO (or AV) mode.
   - Press TV PROG. to select the TV's channel.
   - Press VOL. to adjust the TV's sound volume.
   - Press Mute to mute the TV's sound.
3. To operate your recorder, set the TV/VIDEO switch back to "VIDEO".

NOTE:

- The TV PROG. button does not function with televisions using Code 2.
- The TV/VIDEO button does not function with televisions using Code 3.
- With some televisions, the OPERATE button functions only to turn the TV power off, and the TV/VIDEO button functions only to switch the TV to the VIDEO (AV) mode.
- Whenever you replace batteries in the remote control, it is necessary to re-set the TV code if your television is not a JVC TV.

IMPORTANT
Although the provided remote control unit is compatible with JVC televisions, as well as many TV models manufactured by others, it is possible that the provided remote control will not work with your TV, or in some instances, will have limited function capability.

CODE	TV BRAND NAME
1	JVC
2	BRANDT, NORDMENDE, SABA, TELEAVIA, TELEFUNKEN, THOMSON
3	FERGUSON
4	PHILIPS
5	BLAUPUNKT, GRUNDIG
6	SONY
7	PANASONIC
0	GRAETZ, ITT, LUXOR, SALORA, SELECO

To Control Your Television With Additional Buttons

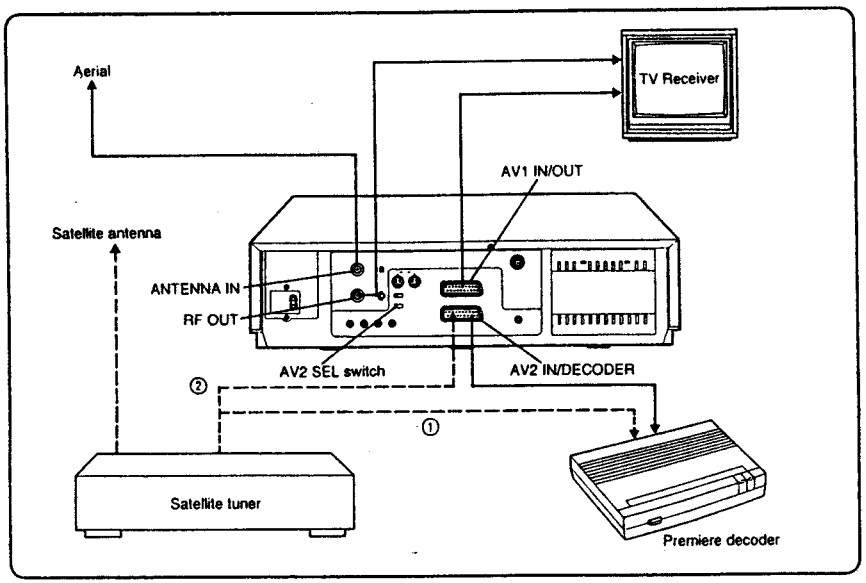
The numeric keys can also be used to select the TV's channel by setting the remote control to the TV mode.

1. Set the TV/VIDEO switch to "TV".
2. Use the numeric keys and the Digit entry button or the SEARCH <</>> buttons to select the TV's channel.
   - With televisions using Code 1, 3, 4, 6 or 7 the Digit entry button corresponds to the 1-digit/2-digit entry switching button (often labelled -/--) of your TV's remote control.
   - With televisions using Code 1, 5 or 0, the SEARCH << button corresponds to the 10 + button, and the SEARCH >> button, to the 20 + button of your TV's remote control.

NOTE:

The way these buttons are used is determined by your TV. Use these buttons as instructed for your TV's remote control.

Information On "Premiere"



CONNECTIONS

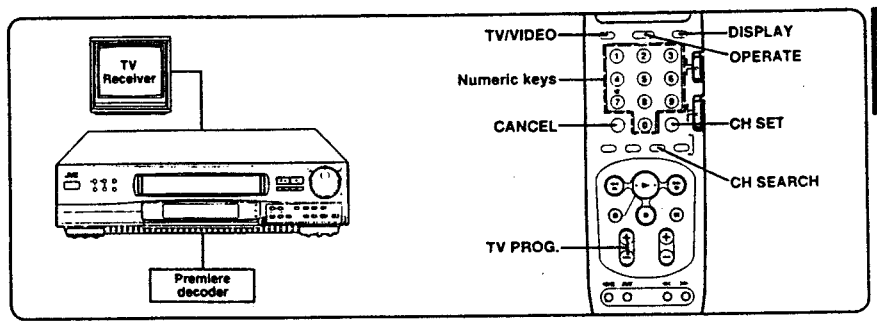
The AV2 IN/DECODER connector can be used as an input terminal for an external Premiere decoder. Simply connect a Premiere decoder and you can enjoy the variety of programming that is available through Premiere.

1. Connect your recorder and TV via their AV connectors (☞ p. 8, AV CONNECTION).
2. Set the AV2 SEL switch on the recorder's rear panel to "DECODER".
3. Connect your recorder's AV2 IN/DECODER connector to the Premiere decoder's Euroconnector using a 21-pin SCART cable.

NOTE:

When connecting a satellite tuner...

- Connect the satellite tuner to the Premiere decoder ①, or if you don't have a Premiere decoder connect the satellite tuner directly to the vieo recorder ②.
- Set the AV2 SEL switch on the rear panel to "AV2 IN".
- To view a programme via the satellite tuner, select AU 2 mode by pressing numeric key "0" and then AV/S SELECT until "AU 2" appears on the display panel.

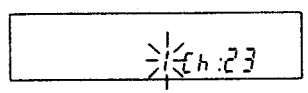


TUNING IN PREMIERE CHANNELS

Preparation

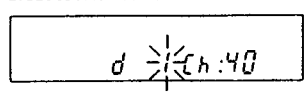
- Turn on the TV.
- Select VIDEO channel (or AV mode).

1. **Press OPERATE to turn on the recorder.**
2. **Press TV/VIDEO so that the VIDEO indicator is lit on the display panel.**
3. **Press CH SET.**
4. **Press CH SEARCH to start automatic scanning for receivable channels.**



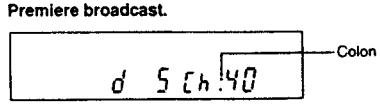
- Automatic scanning stops when a broadcast is detected.
- If the detected broadcast is not a scrambled Premiere broadcast, press CH SEARCH and continue search until a Premiere broadcast is found.

5. **Press TV/VIDEO when a scrambled Premiere broadcast is detected.**



- The programme will be descrambled. For normal (non-scrambled) broadcasts, do not press TV/VIDEO.

6. **Press numeric keys or TV PROG. to select the channel position where you wish to store that Premiere broadcast.**



7. **Press CANCEL to store the channel.**
   - The colon will disappear when the Premiere broadcast is stored.
8. **Press DISPLAY to disengage the Channel Set mode.**

WATCHING PREMIERE

Preparation

- Turn on the TV.
- Select VIDEO channel (or AV mode).

1. Press TV/VIDEO to select the VIDEO mode.
2. Choose a Premiere channel using the Numeric keys or TV PROG. just as you would with regular stations.

Watching One Programme While Recording Another

To watch a regular TV programme while recording a Premiere programme:

- Press the TV PROGRAM button on the TV's remote control and select the channel you want to watch.
- To watch the Premiere programme that is being recorded, press TV/VIDEO and select the VIDEO mode.

To watch a Premiere TV programme while recording a regular programme:

- Press the TV PROGRAM button on the TV's remote control and select the Premiere channel. After displaying a scrambled picture for a few seconds, the programme will become descrambled and a viewable picture will appear on the TV screen.

In Case Of Difficulty

POWER AND TAPE TRANSPORT PROBLEMS

Symptoms	Check points
No power is applied to the recorder.	■ Is the power cord disconnected? — Connect it.
Clock is functioning properly, but the recorder cannot be powered.	■ Is "TIMER" displayed on the display panel? — Press the TIMER button to extinguish the display.
Tape stops during rewind or fast-forward.	■ Is the C. MEMORY button pressed? — Press again to make "M" disappear from the display panel.

RECORDING PROBLEMS

Symptoms	Check points
Recording cannot be started.	■ Is a cassette loaded? ■ Is the safety tab on the cassette removed? — Reseal the slot with adhesive tape.
TV broadcasts cannot be recorded.	■ Has "external input" been selected? — Set to the desired channel.
Tape-to-tape editing is not possible.	■ Is the camcorder or another video recorder correctly connected? ■ Are all necessary power switches turned ON? ■ Has "external input" been selected? — Set to the correct input mode. (☞ p.31).
Camera recording is not possible.	■ Is the camcorder correctly connected? ■ Has "external input" been selected? — Set to the correct input mode. (☞ p.31)
Timer recording is not possible.	■ Have you set the clock correctly and programmed the timer correctly? — Check once again. ■ Is "TIMER" displayed on the display panel? — If not, press the TIMER button to display "TIMER".
ShowView timer recording is not possible, or cannot be done correctly.	■ Have you set GUIDE PROG. numbers into the remote control correctly? (☞ p.20, 21) ■ Did you enter the correct ShowView number for that programme? (☞ p.23)
Satellite programmes are not correctly timer-recorded.	■ Have you connected the satellite tuner to the recorder's AV2 IN/DECODER connector? — If not, make this connection. ■ Have you selected "AU 2" as the channel? — Make sure "AU 2" is selected as the recording channel. (☞ p.24 or 25)

PLAYBACK PROBLEMS

Symptoms	Check points
Playback picture does not appear while the tape is running.	■ If you are using RF OUT connection, is the TV receiver's channel selector set to the correct video channel? — Set it to the RF converter channel (UHF 36). (☞ p.10) ■ If you are using AV connection, is the TV receiver set to the AV mode? — Set it to the AV mode.
Noise appears during visual search.	■ This is normal.
Noise appears during normal playback.	■ Is the automatic tracking mode engaged? — Try manual tracking. (☞ p.14)
Noise appears during slow motion playback.	— Try manual tracking. (☞ p.14)
Noise appears during still playback.	— Press Pause/Slow a few times to remove the noise bars from the screen.
Playback picture is blurred or interrupted while TV broadcasts are clear.	■ Video heads may be dirty. — Head cleaning is necessary. Consult your JVC dealer. (☞ p.37)

Hi-Fi AUDIO PROBLEMS

Symptoms	Check points
TV sound cannot be recorded on Hi-Fi audio track.	■ Has the SIMUL button been pressed? — If "SC" appears on the display panel, cancel the Simulcast mode by pressing SIMUL button.
Breaks are noticeable in Hi-Fi audio reproduction.	■ Is the automatic tracking mode engaged? — Try manual tracking. (☞ p.14)

OTHERS

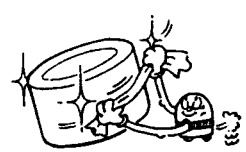
Symptoms	Check points
Whistling or howling is heard from TV during camera recording.	■ Move camcorder or camera's microphone away from TV or reduce TV sound volume.
Channel cannot be switched.	■ Is recording in progress? — Press the Pause/Slow button, change the channel, and press the Play button.
Remote control does not function.	■ Are the batteries discharged? — Replace with new ones. ■ Is the A/B code switch set to the appropriate position? ■ Is the TV/VIDEO code switch to the appropriate position? — Check once again.

ATTENTION:
This recorder contains microcomputers. External electronic noise or interference could cause malfunctioning. In such cases, switch the power off and unplug the power cord. Then plug it in again and switch on. Take out the cassette. After checking the cassette, operate the unit as usual.

Special Note on Head Cleaning

Accumulation of dirt and other particles on the video heads may cause the playback picture to become blurred or interrupted. Although this model is equipped with a built-in head cleaner which automatically cleans the heads, reducing the likelihood of dirty heads, if such troubles are encountered please consult the nearest JVC dealer.

Auto Head Cleaner



A built-in head cleaner automatically cleans the video heads and head drum whenever a tape is loaded or unloaded to reduce head clogging.

Precautions

Please follow these safety precautions. Not doing so may result in damage to the recorder, remote control, or video cassette.

- **Avoid extreme heat and direct sunlight.**
- **Avoid extreme cold.**
- **Avoid extreme humidity.**
- **Avoid dust.**
- **Avoid places subject to vibrations.**
- **Avoid strong magnetic fields.**
- **Do not block the recorder's ventilation openings.**
- **Do not place anything heavy on the recorder or remote control.**
- **Do not place anything which might spill on top of the recorder or remote control.**
- **Do not place the recorder on cushions, pillows, or thick carpeting.**
- **Use the recorder in a stable, horizontal position only.**

Beware of moisture condensation

Moisture in the air will condense on the recorder when you move it from a cold place to a warm place, or under extremely humid conditions — just as water droplets form on the surface of a glass filled with cold liquid. Moisture condensation on the head drum will cause damage to the tape. In conditions where condensation may occur, keep the recorder's power turned on for a few hours to let the moisture dry.

When transporting

- Be sure to remove cassette from recorder before packing.
- Avoid violent shocks to the recorder during packing and transport.

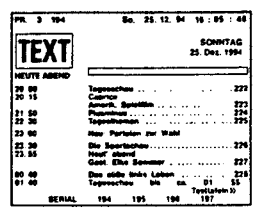
Place cassettes in cassette cases and store vertically.

Using The Optional Teletext Adapter

Teletext services have established themselves as one of the most flexible sources of information and broadcast schedules available to TV and video users. Your video recorder is ready to take full advantage of these services. By connecting an optional teletext adapter (☞ Specifications), you'll not only be able to view the vast number of teletext pages now available, you'll be able to transfer broadcast schedule data directly to your recorder's timer for instant, automatic timer programming. You'll also be able to make full use of your remote control's capabilities, with all the dual or triple function controls working as intended. Here are just a few examples of features available to you when you connect an optional teletext adapter.

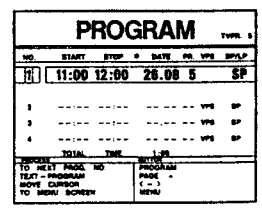
TELETEXT

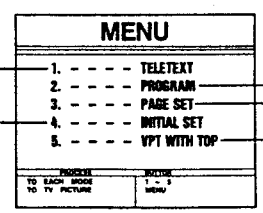
- View broadcast teletext pages.
- Several page access modes are available for quick, convenient location of pages you want to see.
- You can program the video recorder's timer directly using TV schedule pages.



PROGRAM

- Check timer recording data on the colour on-screen display.
- Program the timer manually with the remote's numeric keys.





PAGE SET

- You can preset favourite or often-referred-to pages for immediate access.
- Up to four pages can be stored on each of the numeric keys, for a total of 40 pages.

VPT WITH TOP

- TOP automatic teletext timer programming.
- Convenient colour-coded page access.
- "5.- - - - VPT WITH TOP" only appears when the video recorder's tuner is tuned to a station transmitting TOP broadcasts. (Applicable only in certain areas.)

INITIAL SET

LANGUAGE

- Select one of four languages (English, German, Italian, or Swedish) for on-screen messages.

CLOCK ADJUST

- Set the recorder's clock manually using the numeric keys.
- Set the recorder's clock automatically by reading teletext time information.